

QL684
.N7C7
1942
c.2

BIRDS AROUND
NEW YORK CITY



A detailed map of the New York City region, specifically the western half. The map shows the Delaware River flowing from the north (Pike County) through the center (Sussex, Warren, Morris, Hunterdon counties) towards the south (Bucks County). Major cities and towns are marked with dots and labeled, including Port Jervis, Montague, Hainesville, Sussex, Deckertown, Branchville, Long Pond, Hamburg, Franklin Furnace, Swartswood, Lake Ogdensburg, Newton, Sparta, Lake Hopatcong, Budds Lake, German Valley, Chester, Middle Valley, Gladstone, Bernardsville, Peapack, Liberty Corners, Somerville, Raritan, Flemington, Frenchtown, Mount Pleasant, Clinton, Hamden, Pittstown, Riegelsville, Finesville, Phillipsburg, Easton, Sandts Eddy, Washington, Oxford, Furnace, Belvidere, Drakestown, Hackettstown, Danville, Blairstown, Delaware Water Gap, Stroudsburg, and Trenton. The Lehigh River is shown flowing into the Delaware River near Easton. The map is divided into counties: Pike, Monroe, Sussex, Warren, Morris, Hunterdon, and Bucks. A thick black line runs diagonally from the top right to the bottom right, separating the region covered in the book from the rest of the state. A large rectangular box at the bottom contains the text: "NEW YORK CITY REGION COVERED IN THIS BOOK WESTERN HALF".

**NEW YORK CITY REGION
COVERED IN THIS BOOK
WESTERN HALF**

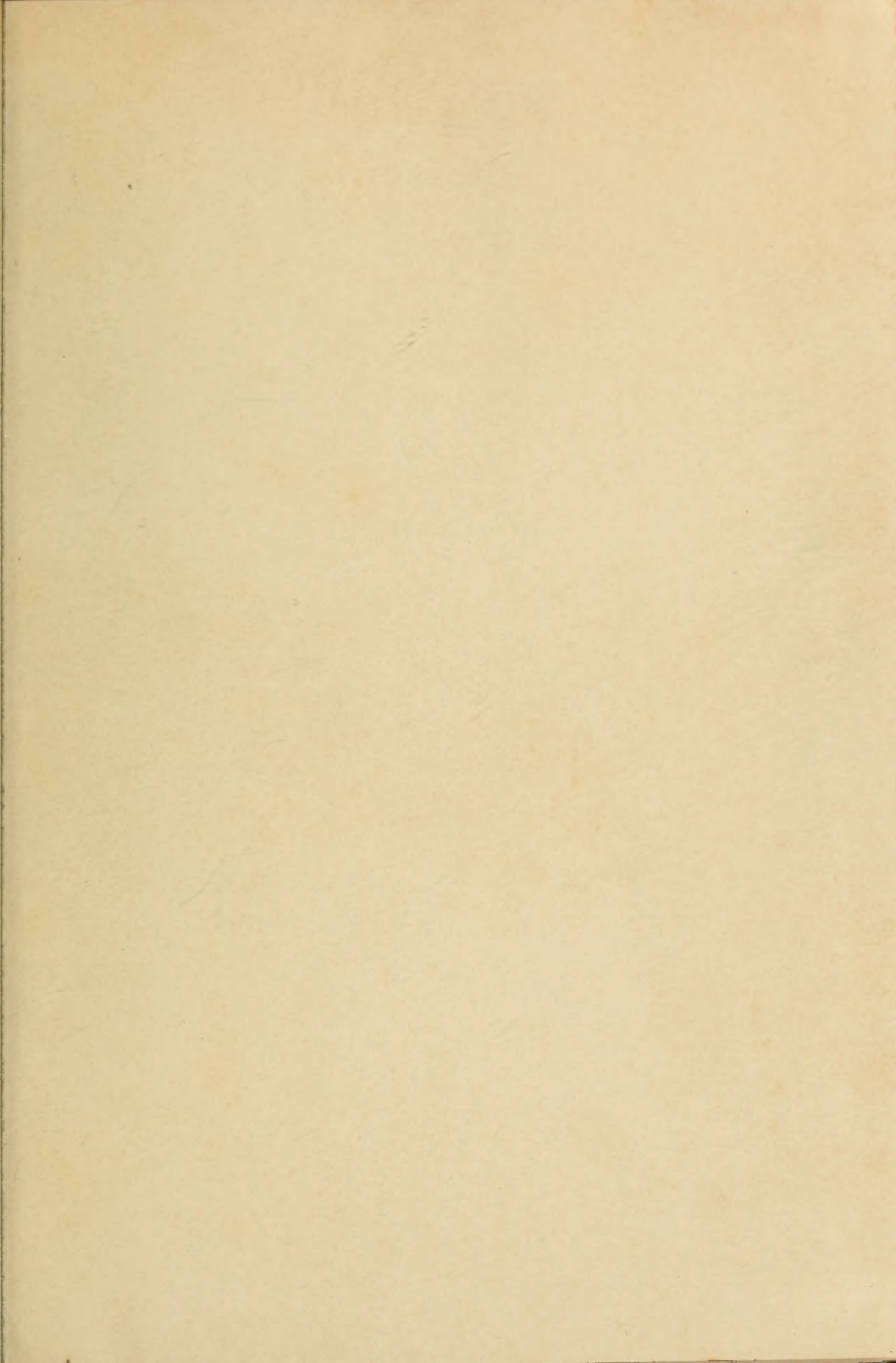


LIBRARY OF THE

AMERICAN MUSEUM OF NATURAL HISTORY
FOR THE
PEOPLE
FOR
EDUCATION
FOR
SCIENCE

GIFT

Paul Lewison





BIRDS AROUND NEW YORK CITY

WHERE AND WHEN TO FIND THEM

by

ALLAN D. CRUICKSHANK

with the cooperation of the

Department of Ornithology

of

The American Museum of Natural History

and

The Linnaean Society of New York

with

PHOTOGRAPHS BY THE AUTHOR

THE AMERICAN MUSEUM OF NATURAL HISTORY

HANDBOOK SERIES, No. 13

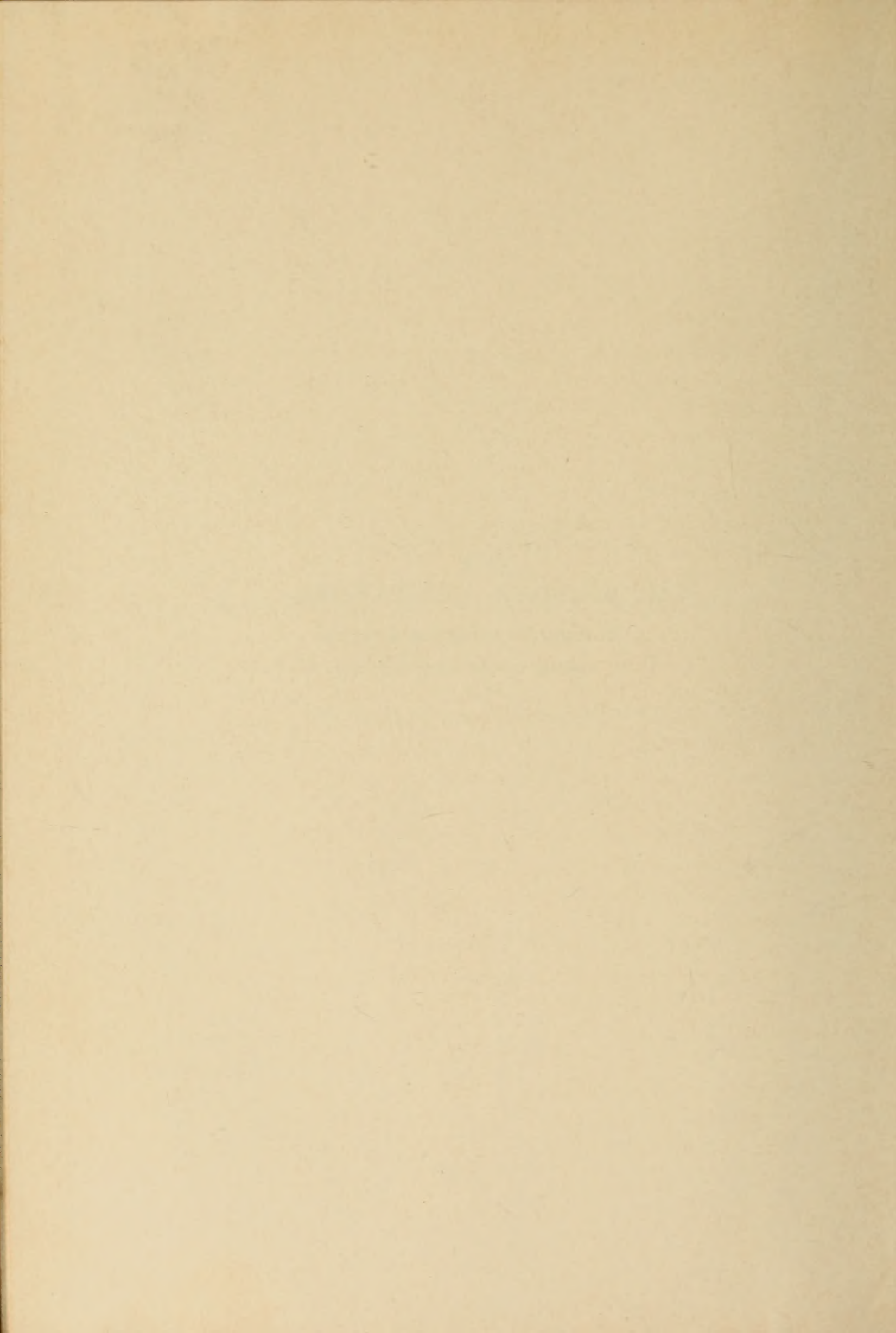
New York

1942

Issued under the direction
of the
COMMITTEE ON POPULAR PUBLICATIONS
ROY W. MINER, *Chairman*

Copyright
The American Museum of Natural History
1942

TO
MY MOTHER AND FATHER
*who always encouraged me in
my study of natural history*



PREFACE

For the past nineteen years field ornithologists have used Griscom's "Birds of the New York City Region" as the standard guide to the distribution and migration of our local avifauna. For the large majority of present day local observers it was their ornithological Bible all through those formative high school and college years. Many of us studied the book species for species with so much care that it came to the point where we could virtually quote *verbatim* the account for any one bird. Yet, though we treasured the book, we thrilled to find new records, new shifts in distribution, additional breeding data, all paradoxically culminating in stamping our ornithological Bible as being far out of date. Naturally any book dealing with the distribution of birds around an urban community as rapidly changing as that around the world's largest city is bound to need revision within a relatively short time. Over a decade ago it became apparent that a new book for the birds of the New York City region would have to be written, but who would undertake such a great task was more than anyone would suggest.

One can readily imagine my conflicting feelings, therefore, when I was asked by The American Museum of Natural History to undertake this project. Should one accept a proposition to write a book to replace one that was his guide and inspiration for so many years? It was immediately apparent that the new book could not be merely a revision. The advanced knowledge offered by nineteen additional years of intensive birding by scores of keen field ornithologists working since the publication of Griscom's volume necessitated an entirely different approach.

One of Griscom's most difficult tasks was to collect sufficient data from all major localities to enable him to give as accurate

an account as possible of the bird life of the entire region. Since there was a relative scarcity of good local lists at that time, the use of data by a few reliable key men who had very thoroughly covered small key points apparently offered the best solution to this problem. Thus we find a few localities, such as Long Beach, Mastic, Orient, Bronx County and Englewood, serve as indices to the status of the birds in the larger surrounding areas. Griscom not only undertook the enormous task of carefully checking and critically examining all published records, but he reexamined all skin collections made locally. His extensive and energetic work enabled me to accept with utter confidence his account as representing all information available up to 1923. This meant that I could concentrate on checking records published since Griscom's date of writing.

All in all, the present writer was confronted with an entirely different situation. There were now numerous valuable local lists. There was now a wealth of analyzed data in the publications of The Linnaean Society of New York. Above all, there was an unbelievable mountain of field notes by local observers that merely required careful analysis to give a local picture of bird life that would have been considered well nigh impossible two decades ago. The abundance of information from localities practically stippling our entire region now made it imperative that the region be treated as a whole. Scores of records accumulated over the years, even for decided rarities, made it impossible to follow the custom of listing all dates for all unusual birds. Certain species for which Griscom easily presented all local records would now require several pages if such a procedure were followed. A network of motor parkways, bridges and causeways has linked the region together and made places which two decades ago were considered remote, mere week end visits and, in some cases, mere afternoon drives. Moreover, interest in birds has

PREFACE

been steadily increasing, and for every competent observer twenty years ago there are now well over a dozen.

From time to time members of The Linnaean Society of New York had pointed out that abnormal dates of occurrence were receiving far too much attention in relation to their importance, while many of the blanks in our knowledge of the normal picture were being somewhat or entirely overlooked. The compilation of unusual records and their subsequent publication in an "Ornithological Year", in many instances came dangerously near presenting an abnormal picture of our local avifauna without definitely warning a reader of that fact. The purpose of the present book, it was conceded, should be to present a detailed normal picture in so far as space would permit and to mention unusual dates and occurrences merely as abnormalities. The earliest arrival and the latest departure dates of a species are no more important, if as important, as the local periods of maximum abundance for the species. Yet this latter information had all too often been neglected in publications on local bird migrations. I have carefully analyzed all available data to obtain these important facts.

Another subject that required special consideration was the presentation of the relative abundance of the various species. A student from eastern Long Island seeing four Worm-eating Warblers in a Spring would write that the species was unusually common, whereas an observer seeing several dozen Worm-eating Warblers along the Elmsford Ridge in Westchester County would write that the species was decidedly uncommon. Furthermore, a count considered very high for an owl or a grouse would be decidedly poor for a robin or a grackle. Thus such terms as common, rare, uncommon, unusual, *ad infinitum*, are purely relative and require some further qualification. Enthusiastic observers have been working out plans based on individuals per hour, individuals per mile, individuals per acre, and various other

apparently justifiable approaches. I have devoted considerable time to this problem, but the variability in the efficiency of observers coupled with the variability of bird counts from county to county, month to month, week to week, day to day, hour to hour, left me more bewildered than I was in the beginning. Yet my failure should not discourage further investigation of this problem. On the contrary, it should serve as a challenge to some other observer or group of observers to work out an acceptable standard way of counting birds. Realizing the necessity, however, for some kind of indication as to the abundance or scarcity of a bird, I have frequently given a figure as to the highest count I have ever made in a day of vigorous birding (at least nine hours of active observation), or I have suggested the number one may expect to see during a day at a given season. No one realizes more than I the weakness of this treatment, but after serious study of all other methods suggested, I and my corps of kind advisers decided it was as good as, if not better than, the other more complicated calculations. At least if writers in the past had given some such definite figure to qualify their terms, to-day we would have some indication as to the relative abundance or scarcity of a species in the years gone by.

In most cases I have unhesitatingly mentioned favorite nesting sites and gone into a discussion of egg dates. While some of the data concerning eggs was from local collections the major part of the information was from students' notebooks. We cannot have a thorough knowledge of our bird-life unless we have a thorough knowledge of the respective breeding periods. Egg collecting is a hobby of the past. Its days of usefulness are gone, and it now leads largely to a great waste of life without offering any adequate scientific return. It seemed inexpedient to me to omit all mention of nesting habits and egg dates merely because a tiny fraction of one per cent of bird students still clings to the outmoded hobby of so-called oology. A study of a bird's behavior around one nest

PREFACE

yields more of scientific value than thirty years of egg collecting. We are weak in these data, and I urge every student to keep detailed notes concerning the number of broods, incubation periods, the formation of the pair, incubation rhythms, releasing ceremonies, injury feigning and all other angles of bird behavior.

Up to twenty years ago there was much to be learned about the identification of local birds in the field, and Griscom wisely included a discussion of the diagnostic field marks in his account of many species. To-day, however, with Roger T. Peterson's "A Field Guide to the Birds" so perfectly and completely summing up all the necessary information for the identification of most of our local avifauna, it would be superfluous repetition to include a discussion of this subject. Suffice it to say, no bird student should be without a copy of Peterson's Guide. That book will tell you how to identify a species. This book will tell you where, when and if to expect it in the New York City region. As a word of caution to the neophyte, however, I deem it expedient to mention that in many cases Peterson's Guide makes it seem much more simple than it really is to identify some of our rather indistinct species, while this book might lead a beginner to believe that it is easier to find many of the species listed than is actually the case. Peterson has undoubtedly worked on the premise that before an observer should venture to record positively the rarer indistinct species he should be entirely familiar with all the regular forms and thus be cognizant of the many pitfalls to be avoided. In discussing the status of a species, I have worked on the premise that all observers realize the difficulty of finding even some of our species which occur regularly, and therefore appreciate the slim chances of finding the rarer forms.

Another of my more difficult tasks has been weighing the reliability of the identification of the living bird. The author has very thoroughly and conscientiously investigated every

note of importance, studied the circumstances under which the observation was made, considered the experience and carefulness of the observer, and in doubtful cases asked the advice and opinion of the local leaders and accepted their decision. In so far as it is humanly possible, I vouch for the accuracy of the records included in this volume. Fortunately most of these records were made by experienced ornithologists either known to me personally or who are students whose ability and caution are widely recognized. After consultation with local leaders I have omitted most questionable reports. The questionable ones included have been mentioned in such a way as to convey the thought unequivocally that there is every likelihood, or at least a possibility, of error in the observation.

After much thought about the most thorough treatment for a book of this type and discussions with the leaders of the local regions who kindly and enthusiastically promised complete cooperation, I was encouraged to go ahead and devote all of my free time to the work. Within the first six months I gathered two suitcases full of records made by bird enthusiasts around New York City. It was immediately apparent that the greatest problem was carefully to analyze and condense a wealth of information, probably unsurpassed in any area of similar size, and yet state all that I wanted to in a limited space sharply defined by the designated size of the book. Space has prevented a more detailed county by county approach, but every effort has been made to live up to the title of the book "Birds Around New York City: Where and When to Find Them." If this volume serves as a satisfactory, up-to-date migration and distribution guide for the field ornithologists of the region, helps and inspires as many new observers to study the local avifauna as did Griscom's book, and, above all, suggests the channels for the gathering of information in which we are now deficient I shall be entirely satisfied. No book of this type is meant to be or can be per-

PREFACE

manent. It must merely serve as a stepping stone in the gathering of information, as an inventory of what we now know about the bird-life of our region, and as an inspiration for the subsequent guide that must inevitably replace it a few decades hence.

Since 1922 the author has been incessantly in the field whenever present in the region, and has returned from his various journeys studying and photographing birds at widely scattered points on the North American continent with ever-increasing interest and enthusiasm. Yet obviously no one individual, no matter how voluminous his notes, could ever hope to write a book with the details required by this volume unless he received help from all the local experts. This in reality is a cooperative project incorporating the knowledge and experience of several hundred observers representing several generations. It would be impractical to mention everyone who has so generously contributed, yet I hope everyone realizes my sincere appreciation. There are some, however, who unselfishly went far out of their way to make my task less difficult. I am indebted to the Bird Department of The American Museum of Natural History, in particular to Dr. Frank M. Chapman and Dr. Ernst Mayr who were ever willing to give me their invaluable advice and counsel on problems of various kinds. Mr. Dean Amadon analyzed all the data in the egg collection of the American Museum. It is impossible to express my gratitude to all members of The Linnaean Society of New York. This organization provides the driving stimulus for most of our local field ornithology, and no serious student should fail to attend its meetings which are held in The American Museum of Natural History at 8 p.m. on the second and fourth Tuesdays of each month from October through May. At these meetings one is bound to receive great stimulation and new ideas, and above all, to develop a broader viewpoint. Its wealth of data in publication and on file was placed unreservedly at my disposal; its

BIRDS AROUND NEW YORK CITY

members responded to every request. Messrs. Robert Arbib, John Elliott, Roy Latham, Christopher McKeever, John Mayer, John T. Nichols and LeRoy Wilcox were the major mines of information for Long Island statistics. For Bronx and Westchester Counties members of the Bronx County Bird Club and Sialis Bird Club were responsible for ninety per cent of the records. John Bull kindly accepted the responsibility of gathering all recent information and of making contact with observers who have been detached from active groups and have failed to publish. In Rockland County, Robert, Richard and Donald Deed were of inestimable help. Naturally the larger part of all New Jersey information came from members of the Uner Ornithological Club and the Field Ornithologists' Club of New Jersey. Mr. Alfred Eynon and Mr. James Lee Edwards acted as my ambassadors in this section, read the original manuscript, and offered helpful criticisms and suggestions. Mr. Ludlow Griscom deserves special thanks not only for the sound foundation he laid for this guide but for his constant willingness to offer advice on the many problems that arose from time to time. Miss Margaret Brooks, in spite of her many editorial responsibilities, gave generously of her time. The New York City branch of the United States Weather Bureau kindly furnished all statistics relative to our local meteorological conditions. I am indebted to Dr. Roy Waldo Miner and Miss Margaret Hanby for their kindly interest, encouragement and assistance in publication. Above all I am indebted to my wife who for a year and a half helped in the tremendous task of collating data, typing and reading proof. Without her help and encouragement this finished product would never have been.

ALLAN D. CRUICKSHANK

FREEPORT, NEW YORK
October 20, 1941.

TABLE OF CONTENTS

	PAGE
PREFACE	vii
INTRODUCTION	1
Area Included.....	1
The Wealth of Bird Life.....	1
Our Major Ecological Blocks.....	3
Open Ocean (Two to Ten Miles Out).....	4
Ocean (From Shore to Two Miles Out).....	5
The Ocean Beaches and Sand Dunes.....	6
Coastal Bayberry, High-tide Bush and Poison Ivy Thickets.....	7
Salt or Brackish Marshes.....	9
Coastal Mud Flats.....	10
Sheltered Salt Water.....	11
Fresh Water	13
Fresh-water Marsh	14
Disturbance Communities	15
Plains and Dry Fields.....	17
Fields with Bushes and Scattered Trees.....	18
Second Growth Deciduous Trees.....	19
Mixed Deciduous Growth.....	21
Great Pine and Oak Barrens.....	23
Seasonal Variation	25
Permanent Residents	25
Summer Residents	26
Summer Visitants	28
Winter Visitants	28
Irregular Winter Visitants	29
Transient Visitants	29
Casual or Accidental Visitants	31
Extinct or Extirpated Species	33
Introduced Species	33
Hypothetical Species	33

BIRDS AROUND NEW YORK CITY

	PAGE
The Ornithological Year.....	35
January	35
February	36
March	37
April	38
May	39
June	42
July	43
August	43
September	44
October	45
November	46
December	47
ANNOTATED LIST OF THE BIRDS FOUND AROUND NEW YORK.....	48
INDEX	477

ILLUSTRATIONS

GULLS AND TERNS.....*Frontispiece*

PLATE	PAGE
1. Gannet	63
2. Snow Egret	69
3. Black-crowned Night Heron.....	75
4. Whistling Swan	83
5. Snow Goose	89
6. Pintail	97
7. Ring-necked Duck	107
8. Hooded Merganser	123
9. Osprey	143
10. Coot	167
11. Upland Plover	185
12. Greater Yellow-Legs	191
13. Purple Sandpiper	197
14. Herring Gull	227
15. Bonaparte's Gull	233
16. Least Tern	245
17. Black Skimmer	249
18. Barn Owl	261
19. Nighthawk	275
20. Young Belted Kingfishers.....	279
21. Young Flickers	281
22. Tree Swallows	307
23. Blue Jay	315
24. Fish Crow	319
25. Mockingbird	335
26. Catbird	337
27. Hermit Thrush	345
28. Bluebird	351
29. Cedar Waxwing	357
30. Parula Warbler	383
31. Black-throated Green Warbler.....	391
32. Chestnut-sided Warbler	395
33. Grackle	427
34. White-throated Sparrow	469
35. Fox Sparrow	471

Maps of New York City Region.....*Endsheets*



INTRODUCTION

THE AREA INCLUDED

Just how much territory should be included in a discussion of the bird-life around New York City is admittedly a highly controversial point. I have had over a dozen potential regions outlined for me, and it would require pages of writing to present the arguments for and against each one. I have very critically studied each suggestion, gone over maps, weighed all pros and cons, and have come to the conclusion that any boundary lines must inevitably be purely arbitrary. Since there are no sharp, unquestionable lines of demarcation, I have decided in general discussions to use a very elastic border which can conveniently be stretched whenever advantageous to the presentation of an accurate picture. On the other hand, for all individual records and for all detailed discussions concerning distribution I have adhered to a definite region. This region is slightly larger than the one followed by Griscom. It includes all of New York State south of the northern boundaries of Rockland and Westchester Counties, all of Long Island, and all of New Jersey north of two straight lines joining New Brunswick with Asbury Park on the coast and Riegelsville on the Delaware River. (See end papers for maps.)

THE WEALTH OF BIRD LIFE

In spite of the small size of the region and the large amount of space covered by cities and large towns, the bird-life is very abundant and diversified. Some of the reasons for this are immediately obvious. The extensive sea-coast with its numerous bays, estuaries and marshes gives us a remarkable variety of water-birds. The Hudson River Valley, Delaware River Valley, mountain ridges of New Jersey, and the coast

line are marked highways of migration along which thousands upon thousands of transients pass each spring and fall. The large variety of habitats is conducive to a large variety of birds. The overlapping of three life zones is a strong contributing factor.

Life zones are unquestionably of fundamental importance, but in a book of this type dealing with a relatively small area it would certainly be wrong to devote much space to this topic. When considering exclusively the birds of the New York City region, life zones become vague and in most cases virtually non-existent. Our region taken as a unit might well be called neutral. The Upper Austral or Carolinian Zone reaches its northern limit here, or extends a little farther north particularly along the coast and up the valleys. Singularly, in no one area in our region does the majority of this group occur, and the distribution of no two species is exactly alike. The large majority of our breeding birds belong to the Alleghanian or Transition Zone. Many of the species in this group, at sea level, reach their southern limit here or only a short distance to the south of us. The relatively few Canadian Zone birds breeding locally are the ones most definitely grouped and distributed. They are confined almost exclusively to the highest sections of northern New Jersey and Rockland County. But even in this group there are problems in local distribution that await scientific investigation. As Griscom has pointed out, it is astonishing to find birds such as the Hooded, Golden-winged and Canada Warblers that are assigned to three different life zones equally common in the same swamp and all three disappearing southward at the same rate. It is puzzling to find a bird like the Hermit Thrush extremely rare in the highlands of the interior where most of our Canadian Zone species breed, and yet to find it breeding fairly commonly in sections of the dry, hot pine barrens of Long Island. It is equally puzzling to find a Transition Zone bird like the Savannah Sparrow nest-

ing only near the coast, and a Carolinian Zone bird like the Turkey Vulture common in the highlands of the interior yet virtually absent from the more Carolinian country on Long Island.

Locally the distribution of birds is more essentially an ecological problem. In any specific block of habitat one may be reasonably sure of finding certain species of birds. Unfortunately a large part of our region has been so altered by man that there are very few extensive uniform blocks of habitat left, and complications are consequently multiplied. But even an ecological approach to the local distribution of birds does not solve many problems, and considerable investigation is still needed. Here is a chance for local enthusiasts to do some very constructive research. Why should a bird like the Swamp Sparrow breed commonly in fresh-water marshes over the larger part of our region, and yet be unknown as a summer resident in many apparently similar fresh-water marshes on Long Island? Why should Nighthawks nest commonly on the rooftops of most New Jersey towns and be absent from the towns of Long Island? Why should the Purple Finch breed on Long Island and yet be absent, or virtually absent, as a summer resident in apparently more ideal habitat in New Jersey? The problems are numerous and await sadly needed research.

OUR MAJOR ECOLOGICAL BLOCKS

Two years ago I listed all of the ecological blocks in the New York City region, selected the fifteen most representative, and started to analyze carefully the bird-life encountered in each. With the passing of each month I became more absorbed in this study and probably devoted more time to this phase of my field work than I ought. Moreover, many cooperators took copies of my charts and checked them in the field. Though this problem still requires years of inten-

sive study, and I hesitate to present my preliminary findings, I have been urged to include these investigations in the hope that they will stimulate observers throughout our region to devote some time to this problem. When these ecological charts are more thoroughly perfected the many interesting questions concerning the local distribution of birds will be more apparent, and it is hoped that this challenge will lead to more research and to a more basic understanding of our bird populations.

1. Open Ocean (Two to Ten Miles Out). Considerable work remains to be done in this type of habitat. Local students have taken far too few pelagic trips, and our information is not conclusive. The presence of certain species, especially the shearwaters and petrel, is apparently correlated with large-scale movements of fish. Therefore the birds may be common one trip and absent another. In the table dealing with migration periods, the time of year must be taken into account. Even so, there are bound to be exceptions. One might well be out on a particular day when a species not listed is very dominant. It must be remembered that the following list deals with the most normal condition.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant</i>	<i>Dominant</i>
Wilson's Petrel	Loon	Herring Gull
Herring Gull	Red-throated Loon	Kittiwake
	Gannet	
<i>Sub-dominant</i>	Herring Gull	<i>Sub-dominant</i>
Sooty Shearwater	Common Tern	Loon
Greater Shearwater		Old-Squaw
Cory's Shearwater	<i>Sub-dominant</i>	White-winged Scoter
(late)	Cory's Shearwater	Black-backed Gull
	(fall)	Dovekie?
	Old-Squaw	
	American Scoter	

SUMMER	SPRING AND FALL	WINTER
	<i>Sub-dominant</i> White-winged Scoter Surf Scoter Red Phalarope Northern Phalarope Black-backed Gull Laughing Gull Parasitic Jaeger	

2. **Ocean (from Shore to Two Miles Out).** All the species listed as sub-dominant in the summer column are either very local or irregular. The shearwaters and petrel when present are generally far off shore. Flocks of shore-birds, swallows and swifts are frequently seen migrating over the ocean and might well be included in this list. The status of any species during the spring and fall is so dependent upon the month, or even the major movement of a particular day, that it is somewhat risky to designate dominant and sub-dominant types. The following list attempts to present the most normal picture.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant</i>	<i>Dominant</i>
Herring Gull	Loon	Loon
Common Tern	Red-throated Loon	Horned Grebe
	Horned Grebe	Old-Squaw
<i>Sub-dominant</i>	Gannet	American Scoter
Sooty Shearwater	Double-crested	White-winged Scoter
Greater Shearwater	Cormorant	Surf Scoter
Cory's Shearwater	Old-Squaw	Red-breasted
(late)	American Scoter	Merganser
Wilson's Petrel	White-winged Scoter	Black-backed Gull
Roseate Tern	Surf Scoter	Herring Gull
Least Tern	Red-breasted	
	Merganser	

SUMMER	SPRING AND FALL	WINTER
	<i>Dominant</i>	<i>Sub-dominant</i>
	Black-backed Gull	Red-throated Loon
	Herring Gull	Holboell's Grebe
	Bonaparte's Gull	(erratic)
	Common Tern	Black Duck
		Greater Scaup
	<i>Sub-dominant</i>	Kittiwake (irregular)
	Holboell's Grebe	
	Cory's Shearwater	
	(fall)	
	Canada Goose	
	Brant	
	Greater Scaup	
	Parasitic Jaeger	
	Ring-billed Gull	
	Laughing Gull	
	Roseate Tern	

3. The Ocean Beaches and Sand Dunes. The coastal bayberry, high-tide bush and poison ivy thickets are treated separately. In the table dealing with migrations, the time of year must be taken into account, and it must be remembered that on a particular day one of the birds placed on the sub-dominant list may well be very abundant. Occasionally a bird not even listed may be quite common. The swallows and most of the shore-birds commence their southward migrations so early that they could be considered in the summer column.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant</i>	<i>Dominant</i>
Piping Plover	Piping Plover	Black-backed Gull
Sanderling	Sanderling	Herring Gull
Herring Gull	Semipalmated	Horned Lark
Common Tern	Sandpiper	Snow Bunting

SUMMER	SPRING AND FALL	WINTER
<i>Sub-dominant</i>	<i>Dominant</i>	<i>Sub-dominant</i>
Spotted Sandpiper	Black-backed Gull	Sparrow Hawk
Roseate Tern (local)	Herring Gull	Ring-billed Gull
Least Tern (local)	Ring-billed Gull	Ipswich Sparrow
	Common Tern	Savannah Sparrow
	Tree Swallow	Song Sparrow
	Savannah Sparrow	
	Song Sparrow	
	<i>Sub-dominant</i>	
	Osprey	
	Pigeon Hawk	
	Sparrow Hawk	
	Semipalmated Plover	
	Black-bellied Plover	
	Ruddy Turnstone	
	Spotted Sandpiper	
	Knot	
	Least Sandpiper	
	Red-backed Sand- piper	
	Laughing Gull	
	Forster's Tern	
	(irregular)	
	Roseate Tern (local)	
	Least Tern (local)	
	Barn Swallow	
	Yellow-throat	
	Ipswich Sparrow	

4. Coastal Bayberry, High-tide Bush and Poison Ivy Thickets. In this habitat it is not feasible to divide the spring and fall column into dominant and sub-dominant groups as there is too much variation, and one or another species might be absent or abundant on some one wave. Moreover, most land or woodland transients are liable to occur, and it is possible that a species not even listed may be common on one particular day. In order to save space all birds in the summer and winter columns have been omitted from the

spring and fall column, even though they occur commonly at some time or other during both seasons. For a complete list of spring and fall birds, therefore, it is necessary to combine all three columns. The Bobolink and the Tree and Barn Swallows start their southward migrations so early that they might be included in the list of summer birds.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Catbird	Pigeon Hawk	Myrtle Warbler
Brown Thrasher	Sparrow Hawk	Junco
Yellow Warbler	Kingbird	Tree Sparrow
Yellow-throat	Phoebe	Song Sparrow
Red-wing	Tree Swallow	<i>Sub-dominant</i>
Song Sparrow	Bank Swallow	Black-crowned Night
<i>Sub-dominant</i>	Barn Swallow	Heron (local)
Green Heron	Red-breasted	Marsh Hawk
Black-crowned	Nuthatch	Flicker
Night Heron	Robin	Starling
Black Duck	Hermit Thrush	White-throated
Marsh Hawk	Olive-backed Thrush	Sparrow (local)
Crow	Golden-crowned	
Towhee	Kinglet	
	Cedar Waxwing	
	Red-eyed Vireo	
	Black and White	
	Warbler	
	Blue-winged	
	Warbler	
	Parula Warbler	
	Magnolia Warbler	
	Black-throated	
	Green Warbler	
	Black-poll Warbler	
	Prairie Warbler	
	Palm Warbler	
	Yellow Palm Warbler	
	Northern Water-	
	Thrush	

SUMMER	SPRING AND FALL	WINTER
	<i>Dominant Transients</i>	
	Redstart	
	Bobolink	
	Goldfinch	
	Chipping Sparrow	
	Fox Sparrow	
	Swamp Sparrow	

5. Salt or Brackish Marshes (Carpeted with Grasses, Cat-tails, etc.). Large sections of this habitat have been destroyed. Much of the remainder is subject to considerable disturbance by man, and consequently many of the more wary and retiring birds are locally rare. For some unknown reason the Long-billed Marsh Wren is absent from many suitable areas on the north shore of Long Island. The Laughing Gull is generally more common away from the ocean front. The American Bittern, Marsh Hawk, Clapper Rail, Sharp-tailed Sparrow and Seaside Sparrow are rare to unknown as breeding birds away from the larger marshes near the ocean. Since all of the birds listed in the summer and winter columns, with the exception of the American Egret, Little Blue Heron, Horned Lark and Snow Bunting, occur commonly both spring and fall it was thought wise to omit them from the table dealing with migration periods and cover this in a statement. For a complete list of spring and fall birds, therefore, one must combine all three columns, excluding the exceptions already mentioned. It must be remembered that the spring and fall column is subject to considerable variation from month to month. The Tree and Barn Swallows, Bobolink and many shore-birds commence their southward migrations so early that they could be included in the summer column. The Canada Goose, Pigeon Hawk, Horned Lark, Snow Bunting and many shore-birds become progressively

and decidedly less common away from the proximity of the ocean. Inland the Marsh Hawk is very rare in winter.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Black-crowned Night Heron	Canada Goose	Black Duck
Long-billed Marsh Wren	Pigeon Hawk	Herring Gull
Meadowlark	Sparrow Hawk	Meadowlark
Red-wing	Black-bellied Plover	Song Sparrow
Sharp-tailed Sparrow	Wilson's Snipe	
Seaside Sparrow	Hudsonian Curlew	<i>Sub-dominant</i>
Song Sparrow	Greater Yellow-legs	Great Blue Heron
	Lesser Yellow-legs	Black-crowned Night Heron
	Pectoral Sandpiper	Rough-legged Hawk
	Least Sandpiper	Marsh Hawk
<i>Sub-dominant</i>	Red-backed Sandpiper	Black-backed Gull
American Egret	Dowitcher	Horned Lark
Little Blue Heron (irregular)	Semipalmated Sandpiper	Crow
Green Heron	Common Tern	Savannah Sparrow
American Bittern	Short-eared Owl	Snow Bunting
Black Duck	Tree Swallow	
Marsh Hawk	Barn Swallow	
Clapper Rail	Yellow-throat	
Herring Gull	Bobolink	
Laughing Gull	Acadian Sharp-tailed Sparrow	
Savannah Sparrow		

6. Coastal Mud Flats. The bird-life in this type of habitat varies considerably from locality to locality. Most species, especially the shore-birds, decrease markedly and some even become locally rare away from the proximity of the ocean. The Tree and Barn Swallows and a few of the shore-birds commence their southward migrations so early and are often so common in this type of habitat in July that they have been included in the summer column. Other shore-birds common by late July or early August might well be treated likewise.

The Laughing Gull is generally more common away from the ocean.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant</i>	<i>Dominant</i>
Black-crowned	Green Heron	Black Duck
Night Heron	Black-crowned	Herring Gull
Piping Plover	Night Heron	
Lesser Yellow-legs	Black Duck	<i>Sub-dominant</i>
Least Sandpiper	Piping Plover	Great Blue Heron
Dowitcher	Semipalmated Plover	Black-crowned
Semipalmated	Black-bellied Plover	Night Heron
Sandpiper	Greater Yellow-legs	Black-backed Gull
Herring Gull	Lesser Yellow-legs	Ring-billed Gull
Laughing Gull	Least Sandpiper	Crow
Common Tern	Red-backed Sand-	
Tree Swallow	piper	
Barn Swallow	Dowitcher	
	Semipalmated	
<i>Sub-dominant</i>	Sandpiper	
Great Blue Heron	Sanderling	
American Egret	Herring Gull	
(local)	Laughing Gull	
Green Heron	Common Tern	
Black Duck	Tree Swallow	
Semipalmated Plover	Barn Swallow	
Sanderling		
Least Tern (local)	<i>Sub-dominant</i>	
	Great Blue Heron	
	Pigeon Hawk	
	Killdeer	
	Ruddy Turnstone	
	Hudsonian Curlew	
	Knot	
	Ring-billed Gull	
	Black Tern	

7. Sheltered Salt Water (including the Sound, Bays and Canals). Such birds as loons, terns, scoters and Old-Squaw generally are markedly less common to rare, away from the

larger bodies of saline water. The Canada Goose, Brant and Double-crested Cormorant seldom alight in numbers away from the proximity of the ocean. With the exception of the Kingfisher all of the birds listed as sub-dominant in the summer column are astonishingly local and some are practically unknown in many localities. Naturally, there is considerable variation in bird-life both spring and fall. Occasionally a transient listed as sub-dominant may be extremely common on one particular day. Swifts, swallows, herons and shore-birds frequently seen flying over this type of habitat might well be added to this list.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant</i>	<i>Dominant</i>
Herring Gull	Loon	Black Duck
Laughing Gull	Double-crested	Scaup
Common Tern	Cormorant	Golden-eye
	Canada Goose	Old-Squaw
<i>Sub-dominant</i>	Black Duck	White-winged Scoter
Osprey	Scaup	Surf Scoter
Roseate Tern	Golden-eye	Red-breasted
Least Tern	Old-Squaw	Merganser
Black Skimmer	White-winged Scoter	Herring Gull
Kingfisher	Surf Scoter	
	Red-breasted	<i>Sub-dominant</i>
	Merganser	Loon
	Herring Gull	Red-throated Loon
	Ring-billed Gull	Horned Grebe
	Laughing Gull	Buffle-head
	Bonaparte's Gull	American Scoter
	Common Tern	Black-backed Gull
		Ring-billed Gull
	<i>Sub-dominant</i>	Kingfisher
	Red-throated Loon	
	Horned Grebe	
	Brant	
	American Scoter	
	Osprey	

SUMMER	SPRING AND FALL	WINTER
	<i>Sub-dominant</i> Black-backed Gull Roseate Tern Least Tern Black Tern (fall) Kingfisher	

8. Fresh Water (Lakes, Reservoirs, Ponds and Rivers with Their Small Rocks, Bars and Isles). Semi-tame Mute Swans, Mallards and Canada Geese are so common in many localities that they are included for the sake of completeness. The American Egret and Little Blue Heron are very irregular and may be rare or absent for an entire summer. Obviously the presence of most species in winter depends on ice conditions. Some ducks not included on the winter list may be fairly regular or even common in sanctuaries where a great deal of feeding is done. All of the birds in the summer and winter columns, with the exception of the American Egret and Little Blue Heron, occur commonly during migrations, but they have been omitted from the spring and fall column in order to conserve space. For a complete list of spring and fall birds, therefore, combine all three columns, excluding the two summer visitants. In spring and fall the bird-life varies considerably from month to month, and it is possible that a species not even listed may be very common for a brief period.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i> Green Heron Black-crowned Night Heron	<i>Dominant Transients</i> Loon Pied-billed Grebe Great Blue Heron	<i>Dominant</i> Mallard (tame) Black Duck Scaup

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Mute Swan (local)	Baldpate	Golden-eye
Canada Goose (tame)	Pintail	American Merganser
Mallard (tame)	Green-winged Teal	Herring Gull
Black Duck	Blue-winged Teal	
Spotted Sandpiper	Osprey	<i>Sub-dominant</i>
Rough-winged	Coot	Mute Swan (local)
Swallow	Solitary Sandpiper	Canada Goose (tame)
Barn Swallow	Greater Yellow-legs	Buffle-head
	Lesser Yellow-legs	Hooded Merganser
<i>Sub-dominant</i>	(fall)	Black-backed Gull
American Egret	Pectoral Sandpiper	Crow
Little Blue Heron	Least Sandpiper	
Wood Duck	Semipalmated	
Killdeer	Sandpiper	
Kingfisher	Ring-billed Gull	
	Laughing Gull	
	Tree Swallow	
	Bank Swallow	

9. Fresh-water Marsh (including Cat-tails, Grasses, Pickerel Weeds, Scattered Bushes, Small Pools and Mud Flats). In many areas this habitat has been entirely destroyed. In others it has been so altered or reduced that there are bound to be decided local differences in bird-life. The status of the more shy and retiring species depends to some degree on the size and remoteness of the marsh. For some unknown reason the Swamp Sparrow is very rare as a summer resident on Long Island. Some years the American Egret and Little Blue Heron are too rare to be considered even sub-dominant. As in all lists dealing with migrations the time of year must be taken into account. All species which are summer or permanent residents in this type of habitat have been omitted from the spring and fall column. For a complete list of spring and fall species, therefore, all birds in the summer column

with the exception of the summer visitants must be added to the list of transients. It was again found impracticable to classify the spring and fall birds as to relative abundance.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Green Heron	Pied-billed Grebe	Mallard (tame)
Black-crowned Night Heron	Great Blue Heron	Black Duck
Black Duck	Baldpate	Tree Sparrow
Barn Swallow	Pintail	Song Sparrow
Long-billed Marsh Wren (local)	Green-winged Teal	<i>Sub-dominant</i>
Yellow Warbler	Blue-winged Teal	Red-tailed Hawk
Yellow-throat	Sora	Pheasant
Red-wing	Killdeer	Crow
Swamp Sparrow	Wilson's Snipe	Starling
Song Sparrow	Solitary Sandpiper	Goldfinch
<i>Sub-dominant</i>	Greater Yellow-legs	Field Sparrow
American Egret	Lesser Yellow-legs	White-throated Sparrow
Little Blue Heron	Pectoral Sandpiper	Swamp Sparrow
American Bittern (local)	Least Sandpiper	
Mallard (tame)	Semipalmated Sandpiper	
Wood Duck	Swift	
Marsh Hawk (local)	Tree Swallow	
Virginia Rail	Starling	
Killdeer	Yellow Palm Warbler	
Spotted Sandpiper	Northern Water- Thrush	
Kingfisher	Louisiana Water- Thrush	
Rough-winged Swallow	Bobolink	
Crow	Rusty Blackbird	
Goldfinch	Grackle	
	Savannah Sparrow	

10. Disturbance Communities (Suburbs, Large Parks, Gardens, Orchards, etc.). This habitat is so varied that further investigations may prove subdivision necessary. In this analysis a broad view of the many complex facets has

been taken, and the most general picture is presented. There are bound to be local contradictions. For a complete list of spring and fall birds it is necessary to include all species listed in the summer column. This omission was made in order to save space. The transients generally found to be most common are listed without any attempt to evaluate their relative abundance. Depending on the month, or even on some particular wave, one or another species might be absent or abundant. Moreover, it is possible that a species not listed might be locally common for a brief period. It will be noted that aquatic habitats have been excluded as these have already been treated — thus ducks and gulls common in many parks are not mentioned.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Rock Dove	Least Flycatcher	Rock Dove
Mourning Dove	Tree Swallow	Downy Woodpecker
(local)	Red-breasted	Blue Jay
Swift	Nuthatch	Crow
Flicker	Brown Creeper	Black-capped
Barn Swallow	Winter Wren	Chickadee
Blue Jay	Hermit Thrush	White-breasted
Crow	Olive-backed Thrush	Nuthatch
House Wren	Veery	Starling
Catbird	Golden-crowned	English Sparrow
Robin	Kinglet	Junco
Wood Thrush	Ruby-crowned	Tree Sparrow
Starling	Kinglet	Song Sparrow
Red-eyed Vireo	Cedar Waxwing	
Yellow-throat	Black and White	<i>Sub-dominant</i>
English Sparrow	Warbler	Sparrow Hawk
Baltimore Oriole	Blue-winged Warbler	Pheasant
Grackle	Parula Warbler	Flicker (local)
Chipping Sparrow	Magnolia Warbler	Hairy Woodpecker
Song Sparrow	Black-throated	Tufted Titmouse
	Blue Warbler	(local N. J.)
		Brown Creeper

SUMMER	SPRING AND FALL	WINTER
<i>Sub-dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Sparrow Hawk	Myrtle Warbler	Golden-crowned
Pheasant	Black-throated	Kinglet
Nighthawk (local)	Green Warbler	Cardinal
Hummingbird	Blackburnian	(local N. J.)
Downy Woodpecker	Warbler	Goldfinch
Kingbird	Chestnut-sided	White-throated
Crested Flycatcher	Warbler	Sparrow
Phoebe	Black-poll Warbler	Fox Sparrow
Wood Pewee	Prairie Warbler	
Rough-winged	Yellow Palm Warbler	
Swallow (local)	Oven-bird	
Purple Martin	Northern Water-	
(local)	Thrush	
Black-capped	Louisiana Water-	
Chickadee	Thrush	
Tufted Titmouse	Canada Warbler	
(local N. J.)	Redstart	
White-breasted	Red-wing	
Nuthatch	Scarlet Tanager	
Brown Thrasher	Rose-breasted	
Bluebird (local)	Grosbeak	
Warbling Vireo	Indigo Bunting	
(local)	Purple Finch	
Yellow Warbler	Towhee	
Cowbird	Savannah Sparrow	
Cardinal	Junco	
(local N. J.)	Field Sparrow	
Goldfinch	White-throated	
	Sparrow	
	Fox Sparrow	

11. Plains and Dry Fields. This habitat is very limited in our region. Most plains have been destroyed or greatly reduced. Birds flying over are excluded, since during most of the year such flights depend to a great extent on the surrounding habitats. Migration periods, as usual, are complex. A

flock of any one species is apt to alight and temporarily be the most abundant species locally.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant</i>	<i>Dominant</i>
Bobolink (local)	Crow	Crow
Meadowlark	Starling	Starling
Grasshopper Sparrow	Bobolink	
Vesper Sparrow	Meadowlark	<i>Sub-dominant</i>
Field Sparrow	Savannah Sparrow	Sparrow Hawk
Song Sparrow	Grasshopper Sparrow	Horned Lark
	Vesper Sparrow	Junco
<i>Sub-dominant</i>	Field Sparrow	Tree Sparrow
Sparrow Hawk	Song Sparrow	Snow Bunting
Killdeer	<i>Sub-dominant</i>	(irregular)
Upland Plover	Marsh Hawk	
(local)	Sparrow Hawk	
Mourning Dove	Killdeer	
Crow	Upland Plover	
	(local)	
	Mourning Dove	
	Flicker	
	Horned Lark	
	Pipit	
	Red-wing	
	Grackle	
	Cowbird	

12. Fields with Bushes and Scattered Trees under Ten Feet. Birds commonly seen flying over generally depend on the surrounding habitats and are omitted. Because of the long list of species occurring during migrations, I have been forced to omit all of those which are permanent or summer residents in this type of habitat from the spring and fall column. For a complete list of spring and fall birds, therefore, it is necessary to add all species in the summer column to the list of dominant transients. Bird-life both spring and fall varies so markedly from month to month, and even from

wave to wave, that no attempt is made to state the relative abundance of the transients occurring commonly. It is possible that a species not listed might be locally common during one particular wave.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Catbird	Downy Woodpecker	Crow
Blue-winged Warbler	Phoebe	Black-capped
Yellow Warbler	Least Flycatcher	Chickadee
Chestnut-sided	Blue Jay	Starling
Warbler	Black-capped	Junco
Yellow-throat	Chickadee	Tree Sparrow
Towhee	Red-eyed Vireo	Song Sparrow
Field Sparrow	Black and White	
Song Sparrow	Warbler	<i>Sub-dominant</i>
<i>Sub-dominant</i>	Nashville Warbler	Sparrow Hawk
Sparrow Hawk	Parula Warbler	Pheasant
Pheasant	Magnolia Warbler	Downy Woodpecker
Mourning Dove	Myrtle Warbler	Blue Jay
Yellow-billed Cuckoo	Prairie Warbler	Goldfinch
Black-billed Cuckoo	Palm Warbler (fall)	Field Sparrow
Flicker	Yellow Palm Warbler	
Kingbird	Redstart	
Crow	Red-wing	
Brown Thrasher	Baltimore Oriole	
Robin	Purple Grackle	
Starling	Junco	
White-eyed Vireo	Chipping Sparrow	
(local)	White-throated	
Yellow-breasted Chat	Sparrow	
(local)	Fox Sparrow	
Cowbird		
Indigo Bunting		
(local)		
Goldfinch		

13. Second Growth Deciduous Trees (Ten to Thirty Feet High). The Least Flycatcher, Veery, Redstart, Rose-breasted

Grosbeak and Indigo Bunting are rare to unknown in summer on the coastal plain. The Golden-winged Warbler is confined almost entirely to northern New Jersey, northern Rockland County and extreme northern Westchester County. Since the status of a species in spring and fall often varies considerably from week to week no attempt is made to classify the birds in this column as to relative abundance. It is inevitable that a species not even listed will occasionally be locally common during migration. In order to save space all birds listed in either the summer or winter columns have been omitted from the spring and fall column, even though all except the Golden-winged Warbler occur regularly during migration periods. For a complete list of spring and fall birds, therefore, it is necessary to combine all species in the three columns excluding the one exception already mentioned.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Crow	Phoebe	Blue Jay
Robin	Hermit Thrush	Crow
Wood Thrush	Olive-backed Thrush	Black-capped
Red-eyed Vireo	Golden-crowned	Chickadee
Black and White	Kinglet	Junco
Warbler	Ruby-crowned	<i>Sub-dominant</i>
Oven-bird	Kinglet	Hairy Woodpecker
Redstart	Starling	Downy Woodpecker
Towhee	Nashville Warbler	White-breasted
<i>Sub-dominant</i>	Parula Warbler	Nuthatch
Whip-poor-will	Yellow Warbler	Brown Creeper
(local)	Magnolia Warbler	
Flicker	Black-throated	
Downy Woodpecker	Blue Warbler	
Crested Flycatcher	Myrtle Warbler	
Least Flycatcher	Black-throated	
(not Long Island)	Green Warbler	

SUMMER	SPRING AND FALL	WINTER
<i>Sub-dominant</i>	<i>Dominant Transients</i>	
Blue Jay	Black-poll Warbler	
Black-capped	Prairie Warbler	
Chickadee	Yellow Palm Warbler	
Veery (not Long Island)	Canada Warbler	
Golden-winged	Purple Finch	
Warbler (very local)	Goldfinch	
Chestnut-sided	White-throated	
Warbler	Sparrow	
Scarlet Tanager	Fox Sparrow	
Rose-breasted		
Grosbeak (not Long Island)		
Indigo Bunting (not Long Island)		

14. Mixed Deciduous Growth (Thirty to Ninety Feet High). Although the Hooded and Worm-eating Warblers are locally common, they are unknown as summer residents on the coastal plain and astonishingly rare during migrations in all localities where they do not breed. The Broad-winged Hawk, Yellow-throated Vireo and Redstart are unknown as summer residents over large sections of Long Island. The Ruffed Grouse is common only in the wilder sections and unknown over most of the suburban area. Once more, in order to save space, all birds in the summer and winter columns have been omitted for the spring and fall column even though all but the Hooded and Worm-eating Warblers occur commonly during migration periods. For a complete list of spring and fall birds, therefore, one must combine all three columns, excluding the exceptions already mentioned. There is so much variation during migrations that it was found impracticable to classify the transients as to relative abundance.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Flicker	Sharp-shinned Hawk	Downy Woodpecker
Crested Flycatcher	Cooper's Hawk	Blue Jay
Wood Pewee	Red-tailed Hawk	Crow
Blue Jay	Yellow-bellied	Black-capped
Crow	Sapsucker	Chickadee
Wood Thrush	Yellow-bellied	White-breasted
Red-eyed Vireo	Flycatcher	Nuthatch
Black and White	Red-breasted	
Warbler	Nuthatch	<i>Sub-dominant</i>
Oven-bird	Hermit Thrush	Ruffed Grouse (local)
Redstart	Olive-backed Thrush	Hairy Woodpecker
(not Long Island)	Golden-crowned	Tufted Titmouse
Scarlet Tanager	Kinglet	(local N. J.)
	Ruby-crowned	Brown Creeper
<i>Sub-dominant</i>	Kinglet	Purple Finch
Red-shouldered	Blue-headed Vireo	(irregular)
Hawk	Nashville Warbler	Goldfinch
Broad-winged Hawk	Parula Warbler	Junco
(local)	Magnolia Warbler	
Ruffed Grouse (local)	Black-throated Blue	
Whip-poor-will	Warbler	
(local)	Myrtle Warbler	
Hairy Woodpecker	Black-throated	
Downy Woodpecker	Green Warbler	
Black-capped	Blackburnian	
Chickadee	Warbler	
Tufted Titmouse	Black-poll Warbler	
(local N. J.)	Canada Warbler	
White-breasted	Grackle	
Nuthatch	White-throated	
Robin	Sparrow	
Veery (local)	Fox Sparrow	
Yellow-throated	Song Sparrow	
Vireo (local)		
Worm-eating		
Warbler (local)		
Hooded Warbler		
(local)		

15. Great Pine and Oak Barrens. This habitat requires a great deal more study. There is much variation in bird-life, the status of a species in many cases depending on whether the pine or oak element predominates. For a complete list of spring and fall birds it is necessary to combine all three columns. Only the more common transients have been listed in the table dealing with migration periods, and no attempt has been made to signify their relative abundance. As in all lists dealing with migrations, the exact time of year must be taken into account.

SUMMER	SPRING AND FALL	WINTER
<i>Dominant</i>	<i>Dominant Transients</i>	<i>Dominant</i>
Flicker	Sharp-shinned Hawk	Hairy Woodpecker
Downy Woodpecker	Mourning Dove	Downy Woodpecker
Blue Jay	Yellow-bellied	Blue Jay
Crow	Sapsucker	Crow
Black-capped	Kingbird	Black-capped
Chickadee	Crested Flycatcher	Chickadee
Prairie Warbler	Phoebe	
Towhee	Wood Pewee	<i>Sub-dominant</i>
Chipping Sparrow	Brown Creeper	Red-tailed Hawk
Field Sparrow	Wood Thrush	Great Horned Owl
Song Sparrow	Olive-backed Thrush	Flicker
	Veery	White-breasted
<i>Sub-dominant</i>	Bluebird	Nuthatch
Red-tailed Hawk	Ruby-crowned	Red-breasted
Great Horned Owl	Kinglet	Nuthatch
Whip-poor-will	Cedar Waxwing	Golden-crowned
Hairy Woodpecker	Red-eyed Vireo	Kinglet
Catbird	Black and White	Goldfinch
Brown Thrasher	Warbler	Junco
Hermit Thrush	Parula Warbler	White-throated
(local)	Magnolia Warbler	Sparrow
Pine Warbler (local)	Black-throated Blue	
Yellow-throat	Warbler	
	Myrtle Warbler	

SUMMER	SPRING AND FALL	WINTER
	<i>Dominant Transients</i> Black-throated Green Warbler Black-poll Warbler Oven-bird Redstart Grackle Purple Finch Fox Sparrow	

SEASONAL VARIATION

The bird-life of the New York City region varies considerably according to season. Some species are present throughout the year; some are present only in summer; some, only in winter; and some, only during migrations. Such birds may be easily and conveniently placed into distinct groups. The status of some species varies, however, from section to section, and the inclusion of such birds in one particular group must often be somewhat arbitrary. Though a few Robins are always present somewhere in our region in winter, the species is essentially a summer resident. Though a few Blue-headed Vireos breed in the highlands of New Jersey, the species is essentially a transient. Though a few scoters summer off our coast, all three species are essentially winter visitants. Naturally, in a region as large and diversified as ours every possible stage of intergradation occurs. Each species has been given considerable thought and has been placed in the category in which it seems properly to belong.

1. Permanent Residents. This group includes all species that regularly have representatives present in many sections of our region throughout the year. Some, like the Bob-white, Ruffed Grouse, Screech Owl and Pileated Woodpecker, are virtually non-migratory. The majority, however, are migratory, but they always have representatives present, the individuals at one season being different from those during another.

LIST OF PERMANENT RESIDENTS

Black Duck	Red-shouldered Hawk
Sharp-shinned Hawk	*Bald Eagle
Cooper's Hawk	Marsh Hawk
*Red-tailed Hawk	Duck Hawk

* Decidedly more common in winter than in summer.

Sparrow Hawk	Prairie Horned Lark
Ruffed Grouse	Blue Jay
Bob-white	Crow
*Herring Gull	†Fish Crow
Barn Owl	Black-capped Chickadee
Screech Owl	Carolina Chickadee
Great Horned Owl	Tufted Titmouse
Barred Owl	White-breasted Nuthatch
*Long-eared Owl	Carolina Wren
Short-eared Owl	†Meadowlark
†Flicker	Cardinal
Pileated Woodpecker	†Goldfinch
Red-headed Woodpecker	†Field Sparrow
Hairy Woodpecker	†Swamp Sparrow
Downy Woodpecker	†Song Sparrow

* Decidedly more common in winter than in summer.

† Decidedly more common in summer than in winter.

2. Summer Residents. Those species that arrive from the south, nest within our region, and then retire south again belong to this group. Some, like the Woodcock, Red-wing and Robin, may be regularly and widely recorded for ten months out of the twelve, while others, like the Orchard Oriole and Kentucky Warbler, may be recorded for only three or four. Some of these species winter very locally and might therefore qualify as permanent residents in some sections, especially near the coast. A few species breed so locally that they might be considered transients in many sections.

LIST OF SUMMER RESIDENTS

*Pied-billed Grebe	†Broad-winged Hawk
Green Heron	Osprey
*Black-crowned Night Heron	*King Rail
*American Bittern	*Clapper Rail
Least Bittern	*Virginia Rail
*Wood Duck	Black Rail
*Turkey Vulture	†Florida Gallinule

* Frequently wintering or wintering very locally.

† Occasionally wintering.

Piping Plover	White-eyed Vireo
*Killdeer	Yellow-throated Vireo
*Woodcock	Red-eyed Vireo
Upland Plover	Warbling Vireo
Spotted Sandpiper	Black and White Warbler
Common Tern	Worm-eating Warbler
Roseate Tern	Golden-winged Warbler
Least Tern	Blue-winged Warbler
Black Skimmer	Nashville Warbler
*Mourning Dove	Yellow Warbler
Yellow-billed Cuckoo	Black-throated Green Warbler
Black-billed Cuckoo	Chestnut-sided Warbler
Whip-poor-will	Pine Warbler
Nighthawk	Prairie Warbler
Chimney Swift	Oven-bird
Hummingbird	Louisiana Water-Thrush
*Kingfisher	Kentucky Warbler
Kingbird	†Yellow-throat
Crested Flycatcher	Yellow-breasted Chat
†Phoebe	Hooded Warbler
Acadian Flycatcher	Redstart
Alder Flycatcher	Bobolink
Least Flycatcher	*Red-wing
Wood Pewee	Orchard Oriole
†Tree Swallow	†Baltimore Oriole
Bank Swallow	*Purple Grackle
Rough-winged Swallow	*Cowbird
Barn Swallow	Scarlet Tanager
Purple Martin	Rose-breasted Grosbeak
†House Wren	Indigo Bunting
*Short-billed Marsh Wren	*Towhee
*Long-billed Marsh Wren	*Savannah Sparrow
*Catbird	Grasshopper Sparrow
*Brown Thrasher	Henslow's Sparrow
*Robin	*Sharp-tailed Sparrow
Wood Thrush	*Seaside Sparrow
Veery	*Vesper Sparrow
*Bluebird	†Chipping Sparrow
*Cedar Waxwing	

* Frequently wintering or wintering very locally.

† Occasionally wintering.

3. Summer Visitants. This small group includes those species that breed to the south of us, yet regularly occur in our region during the summer months. Some, like the Sooty Shearwater, Greater Shearwater and Wilson's Petrel, nest in the Antarctic regions and spend their winter in the Northern Hemisphere. Some, like the egrets and herons, though breeding to the south of us, regularly wander north after their breeding season is over.

LIST OF SUMMER VISITANTS

Sooty Shearwater	Snowy Egret
Greater Shearwater	Little Blue Heron
Cory's Shearwater	*Yellow-crowned Night Heron
Wilson's Petrel	Forster's Tern
American Egret	

*Rare breeder locally.

4. Winter Visitants. Those species that ordinarily breed to the north of us but regularly winter in our region belong to this group. Some, like the Junco, may be present from September to May, while others, like the Snow Bunting and Horned Lark, may be present only from November through March.

LIST OF WINTER VISITANTS

†Loon	†American Scoter
Red-throated Loon	†White-winged Scoter
Holboell's Grebe	†Surf Scoter
Horned Grebe	American Merganser
Red-legged Black Duck	*Red-breasted Merganser
†Greater Scaup	Rough-legged Hawk
Golden-eye	Purple Sandpiper
Buffle-head	†Glaucous Gull
†Old-Squaw	Iceland Gull
American Eider	Black-backed Gull
King Eider	†Ring-billed Gull

* Breeds or has bred locally.

† Numerous summer records.

Kittiwake	Myrtle Warbler
Razor-billed Auk	Siskin
Brünnich's Murre	Ipswich Sparrow
*Saw-whet Owl	Junco
Horned Lark	Tree Sparrow
*Brown Creeper	‡White-throated Sparrow
Golden-crowned Kinglet	Snow Bunting

* Breeds or has bred locally.

‡ Numerous summer records.

5. Irregular Winter Visitants. This group is made up of those species that breed to the north of us and irregularly winter in our region. Some of these birds may be expected three winters out of five. Others may be abundant one winter and then be virtually unrecorded for five or more years at a time. A few could well be placed on the list of accidental visitants.

LIST OF IRREGULAR WINTER VISITANTS

European Cormorant	Northern Shrike
Harlequin Duck	Evening Grosbeak
Goshawk	Pine Grosbeak
Dovekie	Redpoll
Black Guillemot	Red Crossbill
Puffin	White-winged Crossbill
Snowy Owl	Lapland Longspur
Arctic Three-toed Woodpecker	
Acadian Chickadee	

6. Transient Visitants. Those species that winter entirely or chiefly to the south of us, breed entirely or chiefly to the north of us, and regularly pass through our region on migrations belong to this group. The majority occurs every spring and fall. Some, like the Black Tern, Connecticut Warbler and Golden Plover, are regular only during the southward migration and are rare or casual in spring. A few are always rather rare and may be unrecorded for several years. The Laughing Gull, though breeding to the south and north of

us, does not breed locally. A few of the species on this list breed very locally. A few winter very locally, but since they are known over the larger part of our region as transients they are placed in this category.

LIST OF TRANSIENT VISITANTS

† Gannet	Willet
† Double-crested Cormorant	Western Willet
† * Great Blue Heron	† Greater Yellow-legs
† Whistling Swan	Lesser Yellow-legs
† * Canada Goose	Knot
† Brant	Pectoral Sandpiper
† Snow Goose	White-rumped Sandpiper
† * Mallard	Baird's Sandpiper
† Gadwall	Least Sandpiper
† European Widgeon	† Red-backed Sandpiper
† Baldpate	Dowitcher
† Pintail	Long-billed Dowitcher
† European Teal	Stilt Sandpiper
† Green-winged Teal	Semipalmated Sandpiper
* Blue-winged Teal	Western Sandpiper
† Shoveller	Buff-breasted Sandpiper
† Redhead	Marbled Godwit
† Ring-necked Duck	Hudsonian Godwit
† Canvas-back	† Sanderling
† Lesser Scaup	Red Phalarope
† * Ruddy Duck	Northern Phalarope
† Hooded Merganser	Wilson's Phalarope
† Pigeon Hawk	Pomarine Jaeger
* Sora	Parasitic Jaeger
Yellow Rail	* Laughing Gull
† * Coot	† Bonaparte's Gull
Semipalmated Plover	Caspian Tern
Golden Plover	Black Tern
Black-bellied Plover	† Yellow-bellied Sapsucker
Ruddy Turnstone	Arkansas Kingbird
† * Wilson's Snipe	Yellow-bellied Flycatcher
Hudsonian Curlew	Olive-sided Flycatcher
Solitary Sandpiper	* Cliff Swallow
* Has bred or breeds locally.	
† Numerous winter records.	

†*Red-breasted Nuthatch	*Black-throated Blue Warbler
†Winter Wren	*Blackburnian Warbler
†*Mockingbird	Bay-breasted Warbler
†*Hermit Thrush	Black-poll Warbler
Olive-backed Thrush	†Palm Warbler
Gray-cheeked Thrush	†Yellow Palm Warbler
Bicknell's Thrush	*Northern Water-Thrush
*Blue-gray Gnatcatcher	Connecticut Warbler
†Ruby-crowned Kinglet	Mourning Warbler
†Pipit	Wilson's Warbler
*Migrant Shrike	*Canada Warbler
*Blue-headed Vireo	†Rusty Blackbird
Philadelphia Vireo	†Bronzed Grackle
*Prothonotary Warbler	†*Purple Finch
Tennessee Warbler	†Acadian Sharp-tailed Sparrow
†Orange-crowned Warbler	†White-crowned Sparrow
*Parula Warbler	†Fox Sparrow
*Magnolia Warbler	Lincoln's Sparrow
Cape May Warbler	
* Has bred or breeds locally.	
† Numerous winter records.	

7. Casual or Accidental Visitants. All of the species in this group are very rare in our region. A few have occurred too often to be regarded as strictly accidental. Many, however, have homes so distant that their occurrence here is referable to severe meteorological disturbances or a defective migratory instinct. Many of these birds have been captured or seen but once in our region and it is possible that some might never occur again.

LIST OF CASUAL OR ACCIDENTAL VISITANTS

Pacific Loon	White Pelican
Western Grebe	Brown Pelican
Manx Shearwater	White-bellied Booby
Audubon's Shearwater	Man-O'-War-Bird
Mediterranean Shearwater	Louisiana Heron
Black-capped Petrel	Wood Ibis
Atlantic Fulmar	Glossy Ibis
Leach's Petrel	White Ibis
Yellow-billed Tropic-bird	Black Brant

Barnacle Goose	Red-cockaded Woodpecker
White-fronted Goose	American Three-toed
Lesser Snow Goose	Woodpecker
Blue Goose	Gray Kingbird
Barrow's Golden-eye	Scissor-tailed Flycatcher
Black Vulture	Say's Phoebe
Swallow-tailed Kite	Hoyt's Horned Lark
Golden Eagle	American Magpie
Gyr Falcon	Raven
Corn Crane	Hudsonian Chickadee
Purple Gallinule	Bewick's Wren
Oyster-catcher	Varied Thrush
Lapwing	Greenland Wheatear
Wilson's Plover	Townsend's Solitaire
European Woodcock	Bohemian Waxwing
Long-billed Curlew	Cerulean Warbler
European Curlew	Yellow-throated Warbler
Whimbrel	Sycamore Warbler
Curlew Sandpiper	Grinnell's Water-Thrush
Dunlin	Yellow-headed Blackbird
Ruff	Western Tanager
Avocet	Summer Tanager
Long-tailed Jaeger	Blue Grosbeak
Skua	Painted Bunting
Lesser Black-backed Gull	Dickcissel
Black-headed Gull	Hoary Redpoll
Franklin's Gull	Holboell's Redpoll
Little Gull	Greater Redpoll
Ivory Gull	Newfoundland Crossbill
Sabine's Gull	Sitka Crossbill
Gull-billed Tern	Green-tailed Towhee
Arctic Tern	Lark Bunting
Sooty Tern	Labrador Savannah Sparrow
Royal Tern	Baird's Sparrow
Atlantic Murre	Hudson Bay Sharp-tailed
Eastern White-winged Dove	Sparrow
Arctic Horned Owl	Lark Sparrow
Hawk Owl	Bachman's Sparrow
Great Gray Owl	Oregon Junco
Richardson's Owl	Harris's Sparrow
Red-bellied Woodpecker	Chestnut-collared Longspur

8. Extinct or Extirpated Species. Those species that were once part of our local avifauna but no longer occur belong to this group. The Labrador Duck, Heath Hen and Passenger Pigeon are now extinct. The Carolina Paroquet is probably extinct. The others, though still having living representatives on the earth, have not occurred in our region for many years.

LIST OF EXTINCT OR EXTIRPATED SPECIES

Labrador Duck	Eskimo Curlew
Heath Hen	Black-necked Stilt
Wild Turkey	Passenger Pigeon
Whooping Crane	Carolina Paroquet

9. Introduced Species. The following species brought from foreign lands and liberated in our region have bred locally with success and must now be considered part of our avifauna:

LIST OF INTRODUCED SPECIES

Mute Swan	English Sparrow
Pheasant	Starling
Rock Dove	European Goldfinch

Introduced species, like the Skylark, Chaffinch and Chukar Partridge, that have either failed completely or have not shown any signs of success certainly do not deserve a place on our local list and are not counted in the summary.

10. Hypothetical Species. The birds on this list have been reported as occurring in a wild state in our region, but in each case the evidence is not entirely satisfactory. These species fall into three major categories: birds whose occurrence is based on very old reports that are not convincing, those which in all probability were escapes from some cage or aviary, those supported by recent sight identifications which, though probably correct, do not seem conclusive enough for acceptance. Each species is discussed in detail in the proper place.

LIST OF HYPOTHETICAL SPECIES

*Eared Grebe	Ground Dove
Flamingo	Burrowing Owl
Hutchins's Goose	*Bell's Vireo
Rufous-crested Duck	*Townsend's Warbler
Trudeau's Tern	*Western Meadowlark
Cabot's Tern	*Clay-colored Sparrow
Great Auk	

* Recent sight records, probably reliable.

Dozens of birds, such as parrots, cockatoos, macaws, wax-bills, Brazilian Tree-duck, Canada Jay, Brazilian Cardinal, Greenfinch and Bullfinch, have also occurred locally, but in such cases, when the birds were known to be escapes or all evidence points in this direction, it seems ridiculous to take up space with details.

SUMMARY

Permanent Residents	38
Summer Residents	91
Summer Visitants	9
Winter Visitants	36
Irregular Winter Visitants	16
Transient Visitants	103
Casual or Accidental Visitants.....	98
Extinct or Extirpated Species.....	8
Introduced Species	6

Total 405

Hybrids—Kumlien's Gull

Brewster's Warbler

Lawrence's Warbler

THE ORNITHOLOGICAL YEAR

Very few of our birds are permanent residents. Most of them have fairly definite periods of arrival and departure, but since these periods are partially governed in many cases by climatic conditions it would be misleading to give a migration schedule without any reservations. This is especially true in winter, early spring and late fall when the weather is so potent a factor. Moreover, individuals occasionally do the unexpected, and practically every year the earliest arrival and latest departure dates for several species are broken. This will undoubtedly continue until, centuries hence, there will be records for every day in the year for the large majority of birds occurring locally. This illustrates of how little value extreme dates or abnormal records are. It is the complete normal picture that is of primary importance. Whereas the irregularity of a few individuals makes an unequivocal statement impossible, the bulk of the birds follows a fairly definite schedule. In the following analysis an attempt is made to present the most normal picture.

January, with a mean temperature of 30.9° , is the coldest month in the year. This low temperature, combined with an average wind velocity equaling that of March, often makes days afield real tests of rugged endurance. Many birds present in late December are forced to move south in January as their food supply either gives out, is frozen under or covered with snow. With the freezing of inland bodies of water, ducks naturally vanish from the interior. Most of our fresh-water species congregate around parks and sanctuaries where feeding is done. Each severe cold spell brings a rush of waterfowl down the coast. Each easterly gale is apt to produce records for such birds as the Razor-billed Auk, Dovekie and Kittiwake at the eastern end of Long Island. The month rarely

passes without a student discovering some rare irregular winter visitant from the north, or some belated summer resident or transient attempting to brave the boreal blasts. My observations lead me to believe that these out-of-season birds, if they survive, generally attempt to winter year after year but usually, if the first trial does not prove too much, the second or third does, and as a consequence these revolutionary individuals are soon weeded out. Strictly speaking, there is no time of the year when there is no migration, but bird movement is practically at a standstill during the last half of this month and the first half of February.

February, the second coldest month of the year, usually brings the greatest amount of snow. Local bird life is at a minimum during the first half of this month. It is composed chiefly of permanent residents plus winter visitants. Most of the half-hardy birds that lingered into January have either been forced to move south or have been eliminated from the picture. Some years the entire month is cold and snowy. Some years there is a decided thaw as early as the middle of the month. Regardless of the weather many Great Horned Owls are already incubating eggs, and resident Red-tailed Hawks are performing above their respective territories. As soon as the ice leaves our lakes and ponds ducks reappear in the interior. If the mid-February thaw is sustained, our earliest migrants arrive from the south at this time. They are:

(February 15-March 10)

Canada Goose	Meadowlark
Pintail	Red-wing
Robin	Rusty Blackbird
Bluebird	Grackle

These species are not by any means as definite in their movements as those in May. Weather at this time is too powerful a factor and there may be almost a month's variation in their arrival according to season. When the season is very

advanced a second group of birds arrives late in the month. These are:

(February 25-March 15)

Marsh Hawk

Killdeer

Woodcock

Wilson's Snipe

Fox Sparrow

If the season is normal this group does not arrive until early March. If it is late all of the birds on this and the preceding list do not arrive until the second week in March.

March, with a mean temperature of 37.7° , is 2.7° warmer than December. Though called the windy month, it generally has no more of an average hourly wind velocity than January or February. No matter how backward the season, this month is certain to produce a definite northward movement of birds. Even though the weather might remain cold and raw, some potent factor in the migratory urge greater than the temperature factor will show its presence. The species already listed always arrive before March 15 and generally become more numerous as the month progresses. The following species may be expected around the middle of the month, but it is unusual for the majority of them to arrive on any one day.

(March 10-March 25)

Gannet

Black-crowned Night Heron

Baldpate

Green-winged Teal

Shoveller

Wood Duck

Ring-necked Duck

Turkey Vulture

Mourning Dove

Kingfisher

Flicker

Phoebe

Fish Crow

Pipit

Cowbird

By the last week in March the annual amphibian chorus is almost always well under way, and many turtles and snakes are out of hibernation. Certain winter visitants, such as the Snow Bunting, Horned Lark, Ipswich Sparrow and Tree Sparrow, usually depart before the end of the month.

April, with a mean temperature of 49.4° , is 6.9° colder than October. Occasionally there are light snows early in the month. The average date of the last killing frost is April 11, the latest date April 30. The marked development of vegetation and the increase in insects bring many species largely dependent upon insects for food. In mild seasons part of this group arrives in late March and the rest during the first week in April. The bulk most frequently arrives in a pronounced wave early in the second week of this latter month. The following species belong to this early April group:

(March 25-April 10)

Pied-billed Grebe	Golden-crowned Kinglet
Double-crested Cormorant	Ruby-crowned Kinglet
Great Blue Heron	Pine Warbler
Blue-winged Teal	Yellow Palm Warbler
Sharp-shinned Hawk	Savannah Sparrow
Osprey	Vesper Sparrow
Piping Plover	Chipping Sparrow
Greater Yellow-legs	Field Sparrow
Yellow-bellied Sapsucker	White-throated Sparrow
Tree Swallow	Swamp Sparrow
Hermit Thrush	

By the middle of the month the migration of fresh-water ducks generally terminates. At the same time, the numbers of most late March and early April transients increase and the following new species may be expected:

(April 12-April 25)

Green Heron	Laughing Gull
Bittern	Rough-winged Swallow
Broad-winged Hawk	Barn Swallow
Pigeon Hawk	Purple Martin
Clapper Rail	Blue-headed Vireo
Virginia Rail	Black and White Warbler
Sora	Myrtle Warbler
Upland Plover	Black-throated Green Warbler
Pectoral Sandpiper	Louisiana Water-Thrush
Sanderling	Towhee

It must be remembered throughout this summary that whereas mild weather is conducive to a wave of land-birds, the opposite conditions usually produce the greatest concentrations of shore-birds that, during mild weather, regularly skip our region. Strictly speaking, therefore, it is erroneous to list them in the same groups. Moreover, the shore-bird movements are generally more irregular and more extended, and the peak of migration for the majority of species comes late in May, long after the earliest individuals have appeared. Late in April there is generally a pronounced wave bringing most of the birds on the following list:

(April 20-April 30)

King Rail	Whip-poor-will
Florida Gallinule	Swift
Semipalmated Plover	Bank Swallow
Black-bellied Plover	Cliff Swallow
Spotted Sandpiper	House Wren
Solitary Sandpiper	Short-billed Marsh Wren
Least Sandpiper	Yellow Warbler
Red-backed Sandpiper	Palm Warbler
Semipalmated Sandpiper	Northern Water-Thrush
Common Tern	Henslow's Sparrow

May, with a mean temperature of 60.6° , is 6.2° colder than September. The wind, which has been blowing chiefly from the northwest since the beginning of the year, now starts to swing to the southwest. The large flocks of birds that flood the countryside make this month the most exciting of the year for the average bird student. The movements during this month are much more precise than at any other time, some species arriving with almost the precision of clockwork. Naturally weather and temperature cause some, and occasionally considerable, variations. A wave is generally due to unfavorable weather damming up the birds moving northward for several days. If such a spell is followed by a rise in temperature and a light southerly wind, the delayed birds

rush forward *en masse*. The largest concentrations occur when all the forementioned conditions take place, and a short local downpour in early morning forces all the birds passing over to land within that rather restricted area. If widespread unfavorable weather continues for too long a period, the birds merely trickle through and the results are disappointing to the bird watcher. Singularly protracted mild warm weather usually has the same effect. The birds move forward every night and on no one day is there a spectacular wave. Fortunately, the normal migration is the most ideal for the bird student. The following species ordinarily arrive between April 29 and May 7. In very advanced seasons many of these birds arrive before May 2, but during the normal year there is a marked wave between May 3 and May 7 bringing most of the land-birds in this group with it:

(April 29-May 7)

Least Bittern	Nashville Warbler
Hudsonian Curlew	Parula Warbler
Dowitcher	Black-throated Blue Warbler
Least Tern	Chestnut-sided Warbler
Hummingbird	Prairie Warbler
Kingbird	Oven-bird
Crested Flycatcher	Yellow-throat
Least Flycatcher	Hooded Warbler
Catbird	Redstart
Wood Thrush	Orchard Oriole
Veery	Baltimore Oriole
White-eyed Vireo	Scarlet Tanager
Yellow-throated Vireo	Rose-breasted Grosbeak
Warbling Vireo	Grasshopper Sparrow
Blue-winged Warbler	Seaside Sparrow

Between May 8 and 12 there is generally another definite wave. In backward seasons some of the species on the preceding list do not arrive until this movement comes.

(May 8-May 12)

Ruddy Turnstone	Olive-backed Thrush
Acadian Flycatcher	Red-eyed Vireo

Worm-eating Warbler
Magnolia Warbler
Blackburnian Warbler

Yellow-breasted Chat
Canada Warbler

The third wave in May brings large numbers of the species already listed for this month, plus the following new ones:

(May 10-May 15)

Nighthawk
Gray-cheeked Thrush
Golden-winged Warbler
Tennessee Warbler
Cape May Warbler
Bay-breasted Warbler

Black-poll Warbler
Wilson's Warbler
Bobolink
White-crowned Sparrow
Lincoln's Sparrow

As the month progresses, most of our transient shore-birds become increasingly common, the largest concentrations occurring after strong easterly gales. The fourth group of land-birds for the month is the one anxiously awaited by most bird students. One fortunate enough to be afield on this day can easily record over one hundred species by covering a variety of habitats. During exceptional movements, 163 species have been recorded in a day by a single party working in New Jersey, and as many as 149 species have been recorded by one party on Long Island. This wave ordinarily brings large numbers of the species already listed for May plus the following new ones:

(May 10-May 18)

Yellow-billed Cuckoo
Black-billed Cuckoo
Wood Pewee

Cedar Waxwing
Orange-crowned Warbler
Indigo Bunting

After this fourth wave, which is often referred to as the height of migration, land-birds ordinarily fall off in numbers. Within the next week, however, there is another pronounced

movement bringing swarms of female warblers, large numbers of the late-arriving summer residents, such as the Wood Pewee, Red-eyed Vireo, and Indigo Bunting, and the following few new species:

(May 15-May 26)

Yellow-bellied Flycatcher

Alder Flycatcher

Olive-sided Flycatcher

Kentucky Warbler

Mourning Warbler

Acadian Sharp-tailed Sparrow

During the last week in the month the transient thrushes, the Black-poll Warblers and the female warblers continue to pass through in large numbers. Interest at this time, however, usually shifts to the coast where the flocks of transient shore-birds are to be seen.

June has a mean temperature of 68.8°. Southerly winds prevail. There is often considerable land-bird migration during the initial week. In fact, stragglers of an astonishing number of species of land-birds are passing through up to the middle of the month. Most of our local summer residents are on territories and busy raising young. Unfortunately, most students' interest now wanes. It must be emphasized that careful notes on the behavior of a pair of birds around one nest are of far more scientific value than the recording of all of our rare or accidental visitants. Moreover, details concerning the distribution of many summer residents, and particularly the reasons for their odd distribution, are still wanting. All students are urged to cooperate with the Field Work Committee of The Linnaean Society of New York in the accumulation of this information. In late May or early June, the Sooty Shearwater, the Greater Shearwater and the Wilson's Petrel arrive off our coast. Many shore-birds are present in numbers until the middle of the month. During the last week the first southbound Least Sandpipers, Dowitchers and Semipalmated Sandpipers often arrive, and the invasion of southern herons begins. By the end of the month such species

as Starlings and Grackles gather in flocks and begin to wander about the countryside.

July, with a mean temperature of 73.8° , is the hottest month in the year and normally the one with most sunshine. The breeding season for many species now ends and the avian chorus naturally diminishes. Considerable research is still required concerning the land-birds at this season. There is astonishingly little definite information about second broods, dispersal of young, cessation of song, moults, roosts, migration, etc. Students are urged to gather all possible data on these subjects. By the second week in the month the southward migration of Least Sandpipers, Dowitchers and Semipalmated Sandpipers is always well under way, and the first flocks of Semipalmated Plover, Black-bellied Plover, Hudsonian Curlew, Lesser Yellow-legs, Knots and Sanderlings are arriving from the north. As the month progresses, the visiting terns and herons become more and more common. The Cory's Shearwater, Great Blue Heron and Solitary Sandpiper generally appear by the middle of the month. At the same time flocks of Tree Swallows and Bobolinks gather on our marshes. During the last half of the month the shore-bird migration becomes more marked and continuous, large flocks of Black Terns appear on our saline waters, and the migration of Barn Swallows and Kingbirds becomes noticeable.

August, with a mean temperature of 73.1° , is the second warmest month in the year. An average precipitation of 4.33 inches labels it the wettest month. On the coast the migration of shore-birds and terns becomes more and more exciting and is at its peak late in this month or early in September. By the third week in the month the southern herons are usually here in maximum numbers. The dense vegetation, absence of song, retiring habits of moulting individuals and the change to obscure plumage of many species make a study of land-birds difficult. Many of them begin their southward migration at this time, but their arrival dates are less precise

than they are in spring and the birds seldom come in big waves. The following species ordinarily arrive during the first half of this month:

(August 1-August 15)

Blue-winged Teal	Yellow-bellied Flycatcher
Marsh Hawk	Golden-winged Warbler
Sora	Bay-breasted Warbler
Ruddy Turnstone	Northern Water-Thrush
Parasitic Jaeger	Canada Warbler
Nighthawk	

During the last half of the month the birds on the preceding list become much more common and the following new ones appear:

(August 15-August 31)

Common Loon	Olive-sided Flycatcher
Double-crested Cormorant	Red-breasted Nuthatch
Wood Duck	Migrant Shrike
Sharp-shinned Hawk	Tennessee Warbler
Pigeon Hawk	Magnolia Warbler
Florida Gallinule	Cape May Warbler
Golden Plover	Blackburnian Warbler
Red-backed Sandpiper	Mourning Warbler
Alder Flycatcher	Wilson's Warbler

September has a mean temperature of 66.8°. The winds, which have been chiefly southerly since May, again swing to the northwest. The shore-bird migration is usually at its peak early in this month, and a sustained easterly gale at this time will generally produce the largest local list of shore-birds for the entire year. During the first ten days in the month small flocks of Baldpates, Pintails, Green-winged Teal, Hooded Mergansers and all three species of Scoters regularly appear. At the same time there is usually a pronounced wave of land-birds, bringing flocks of northern representatives of many of

our common summer residents, plus most of the following species:

(August 29-September 10)

Ring-billed Gull	Parula Warbler
Cooper's Hawk	Black-throated Blue Warbler
Olive-backed Thrush	Black-throated Green Warbler
Philadelphia Vireo	Connecticut Warbler
Nashville Warbler	

Another movement around the third week in the month brings larger numbers of the species on the preceding list, plus the following additional ones:

(September 10-September 22)

Shoveller	Black-poll Warbler
Red-breasted Merganser	Palm Warbler
Broad-winged Hawk	White-throated Sparrow
Wilson's Snipe	

During the last half of the month there is generally a light frost, which sends many summer residents and early fall transients south. The Wilson's Petrels and Black Terns disappear at this time, and southern herons become very scarce. The Red-backed Sandpiper now becomes common. The following species may be expected on the heels of this first frost:

(September 20-September 30)

Red-throated Loon	Ruby-crowned Kinglet
Horned Grebe	Pipit
Greater Scaup	Blue-headed Vireo
Gadwall	Myrtle Warbler
Coot	Yellow Palm Warbler
Short-eared Owl	Purple Finch
Sapsucker	Savannah Sparrow
Brown Creeper	Acadian Sharp-tailed Sparrow
Winter Wren	Junco
Gray-cheeked Thrush	Lincoln's Sparrow
Golden-crowned Kinglet	

October has a mean temperature of 56.3°. The first heavy frost usually comes early in the month, the first killing frost

occasionally during the last half. Migration now becomes so dependent on the weather that it is difficult to make any general statement. Whereas some of the following species occasionally appear late in September, the large majority of them arrive with, or soon after, the first heavy frost.

(October 1-October 20)

Holboell's Grebe	Bonaparte's Gull
Gannet	Hermit Thrush
Canada Goose	Orange-crowned Warbler
Brant	Rusty Blackbird
Golden-eye	Pine Siskin
Old-Squaw	White-crowned Sparrow
American Merganser	Fox Sparrow

At this season one will frequently see hundreds and sometimes over one thousand Cory's Shearwaters milling over the waters off Montauk Point. Throughout the month the sparrows are the predominant birds, large flocks of them generally flooding the countryside. With each successive heavy frost the shore-bird population decreases, and the duck population increases. The arrival of the next group of winter visitants depends on the date of the first killing frost, and therefore it might vary almost as much as a month. It regularly brings large flocks of the water-birds on the preceding list plus the following new species:

(October 20-November 10)

Ring-necked Duck	Horned Lark
Buffle-head	Ipswich Sparrow
Rough-legged Hawk	Tree Sparrow
Purple Sandpiper	Snow Bunting
Kittiwake	

November, with a mean precipitation of 2.96 inches, is normally the driest month of the year. The mean temperature of the month is 44.2° . The average date of the first killing frost is November 6. Any definite schedule for bird move-

ments now becomes rather absurd, for the weather is the vital factor. The first killing frost forces the large majority of insectivorous birds to depart southward and regularly brings the species on the preceding list rushing down from the north. During the first half of the month the migration of both species of loons is at its peak, and occasionally an observer will see as many as several hundred flying down the coast in a single day. With protracted cold weather the winter waterfowl and sea-birds arrive in large numbers, and impressive concentrations of Scoters, Kittiwakes and Gannets are regularly recorded off eastern Long Island. By the middle of November bird feeding stations should be set up and in operation.

December, with a mean temperature of 35° , is the third coldest month in the year. The majority of the species that arrived in March remain until the first sustained freezing spell or deep snow. Many of the winter visitants do not arrive in large numbers until the initial week in this month. As inland waters freeze over, aquatic birds either rush south or move to saline waters. Along the coast the waterfowl migration continues throughout the month, each cold snap bringing another wave of birds from the north. Interest at this season is centered on the Christmas Census of birds, an annual population count sponsored by the National Audubon Society. Any keen observer who has been actively afield in the New York City region during the entire year and who has made an effort to record as large a variety of birds as possible should end the year with a list of from 250 to 270 species.

ANNOTATED LIST OF THE BIRDS FOUND AROUND NEW YORK CITY

GAVIIDAE: LOONS

Common Loon

Gavia immer immer (Brünnich)

Like all members of its family, the Common Loon is eminently an aquatic bird seldom alighting on any but our larger bodies of water. Naturally it is most frequently recorded along the ocean, on the Sound and on the larger coastal bays, and in such localities it is common during migrations, fairly common in winter and uncommon as a non-breeding summer resident. Inland the species is decidedly less common. On such places as the Hudson River, Greenwood Lake, the Jersey City Reservoir near Boonton and the Kensico and Croton Reservoirs in Westchester County, individuals are irregularly found in winter whenever there is open water, and at times during the height of migrations one will often see a dozen or more birds gracing these waters. Elsewhere in the interior the loon is generally unrecorded except during late April and May when migrants are intermittently seen flying high overhead but, strangely enough, there is no comparable fall flight except along the coast.

Around the middle of August a few loons are regularly seen flying down the coast, and by the end of this month the fall movement is well under way. Each successive frost in September and October brings a pronounced flight from the north, and during November maximum abundance for the entire year is reached. During this month one will occasionally see a hundred or more individuals in a day over the ocean and a lesser number on the Sound. After November, numbers ordinarily decline rapidly. Along the coast proper and on all but

the extreme western end of Long Island Sound it is a fairly common winter resident. One may reasonably expect to see from one to fifteen birds on any day's trip along the coast at this season. With the arrival of March a definite northward movement sets in, reaching full force from April 10 through May. Though a few birds regularly summer, and a pair was suspected of nesting on Croton Lake in northern Westchester County in 1927, there is, to date, no positive nesting record for our area.

Pacific Loon

Gavia arctica pacifica (Lawrence)

An accidental visitant from the west. A specimen collected off Sand's Point, Long Island, April 29, 1893, was erroneously labeled Black-throated Loon until correctly identified by W. Miller in 1917.

I find the following recent sight identifications by experienced observers that are undoubtedly correct: Long Beach, Long Island, October 3, 1937 (Sedwitz); Highlands, New Jersey, February 5, 1938 (F. Allen); Rye, Westchester County, December 22, 1940, to mid-January, 1941 (Herbert, Kassoy, Oboiko, R. T. Peterson *et al.*); three, Montauk Point, Long Island, March 23, 1941 (Helmuth).

Red-throated Loon

Gavia stellata (Pontoppidan)

In our region the Red-throated Loon is essentially a bird of the coast, rarely occurring away from the ocean, Long Island Sound and the larger saline bays. In these localities it is common during migrations, uncommon but regular in winter and rare in summer. It becomes progressively less common westward on the Sound. Away from the coast the species is purely fortuitous. I find several records for the Hudson River, two records for Newark Bay, and reports of one on Lake Parsippany, New Jersey, May 22, 1937 (Fleischer

and Solitar), and another on Hillview Reservoir, Westchester County, from July through November, 1936 (Sialis Bird Club).

In early September a few Red-throated Loons irregularly trickle into our region, but it is not until the first light frost in late September that any widespread movement arrives from the north. During October numbers progressively increase, and by the end of this month or early November maximum abundance for the entire year is reached. For a brief period during this season this species often outnumbers the Common Loon, and hundreds are occasionally recorded in one day flying south over the ocean. By early December migration is virtually concluded. During average winters the bird is uncommon but regular on the ocean, on all but the western end of Long Island Sound, and on some of the largest salt-water bays, but one will rarely find more than six individuals on any day's trip during this season. There is a marked return flight up the coast from early March through April, but, singularly, the numbers never approximate those of the southward flights in autumn. Late April and May offer local students their only opportunity to see this species in its breeding plumage with a red throat. On May 15, 1936, I saw as many as nine birds in breeding plumage off Eaton's Neck, Long Island. By the fourth week in May the Red-throated Loons have ordinarily departed for their far northern breeding grounds, occasionally leaving one to four non-breeding birds to pass the summer.

COLYMBIDAE: GREBES

Holboell's Grebe

Colymbus grisegena holboelli (Reinhardt)

The Holboell's Grebe, like all members of its family, is strictly an aquatic bird. Its status in this region seems to vary considerably from year to year. On the ocean and on the

western four-fifths of Long Island Sound it is generally fairly common, though irregular, during migrations and rare in winter. It occurs much less frequently on the Hudson River and on our larger saline bays, and even less frequently on the rivers, lakes and reservoirs of the interior. The majority of records for inland are of single birds, with the spring dates concentrated in April and the autumn dates chiefly in October.

The Holboell's Grebe has arrived at Rye, Westchester County, as early as September 10, 1936 (Cruickshank), and there are other records sprinkled throughout this month. The first widespread wave seldom arrives, however, until the first heavy frost in early October, and it is not until the second week in November that maximum abundance is normally reached. Unusual indeed is the day one sees a flock of more than two dozen of these birds in our region, and the species is more regularly recorded singly or in groups up to ten. A few birds often remain in winter, especially at the eastern end of Long Island. Normal spring migration is usually evident by March 18, and for the next month and a half one may occasionally see Holboell's Grebes in their showy black, white and chestnut breeding plumage. This spring movement is virtually concluded by mid-April, yet stragglers linger into May, and I find a record of one on a pond near Leonia, New Jersey, June 10-24, 1905 (Hix), and another on Newark Bay, New Jersey, July 8, 1934 (W. Eaton and Rose).

Normal migration is not to be confused with those marked flights that occur from time to time after extremely cold waves in midwinter have frozen over the Great Lakes and other large inland bodies of water, forcing the grebes wintering in those places to rush to the coast. At such times many of these weak-winged birds fall exhausted inland, giving some counties their only local records. Many birds reach the coast in such a weakened condition that they soon die. I

have picked up a score of birds along a few miles of beach after such a catastrophe. The last big invasion occurred in 1934. For details see *Proceedings of the Linnaean Society* (No. 47, pp. 103-104).

Horned Grebe

Colymbus auritus Linnaeus

The Horned Grebe is much more common than the larger Holboell's Grebe and of much more frequent occurrence than that species on small bodies of water away from the coast. It is, however, primarily a bird of the wild ocean surf and the wide stretches of Long Island Sound where, from mid-October to mid-April, it is one of the most characteristic winter visitants. Each year it is recorded as a transient and as a rare winter visitant on Newark Bay and on most of the large inland rivers, lakes and reservoirs, but elsewhere in the interior it is accidental.

The first widespread flight of Horned Grebes ordinarily arrives on the heels of the first light frost in late September, and by mid-October the species is fairly common. Numbers steadily build up until the peak of the fall flight is reached in early November. At this season one may often find up to fifty, and rarely over one hundred birds, in a vigorous day of birding either along the ocean or along the eastern four-fifths of Long Island Sound. Subsequently numbers fall off, yet hundreds remain in our region throughout the winter, and seldom is a day spent along the ocean or the Sound at this season when at least several birds are not recorded. During the second week in March the return flight normally starts, and in early April a spring peak is reached. By the end of April many of the birds could well be mistaken for another species for they have now dressed up in full nuptial plumage. After mid-May the Horned Grebe is purely casual, yet a few non-breeding birds occasionally remain throughout the summer.

Eared Grebe*Colymbus nigricollis* subspecies?

Doctor Janvrin and Walter Sedwitz, two very competent observers, studied a bird off Long Beach, Long Island, on January 9 and 16, 1938, which they identified as an Eared Grebe. During the time between the two observations they were able to check carefully in books and with museum skins and they feel certain of their identification. Moreover, they concluded that the bird belonged to the European race, *C. n. nigricollis* (*Proceedings of the Linnaean Society*, No. 49, p. 58). Messrs. Richard Allyn and Walter Sedwitz saw a bird at Jones Beach, Long Island, on March 16, 1941, which they feel sure was an Eared Grebe. In either case, even if the bird was an Eared Grebe, there is no way now of positively ascertaining which subspecies was present. It seems advisable to relegate this bird to the hypothetical list pending further substantiation.

Western Grebe*Aechmophorus occidentalis* (Lawrence)

Messrs. Rogers, Hix and Fleischer, three veteran field students, made an excellent study of a Western Grebe off Long Beach, Long Island, on May 21, 1946. After taking into consideration the fact that this species has occurred on the eastern seaboard on several occasions, that it is a very distinct bird in the field, and that the identification was made by three competent observers, I can see no reason for relegating this bird to the hypothetical list on the flimsy basis that no specimen has ever been collected within our arbitrary boundaries.

Pied-billed Grebe*Podilymbus podiceps podiceps* (Linnaeus)

This little Hell-diver, the only member of its family breeding locally, is very partial to open fresh-water marshes and

ponds with an abundance of aquatic vegetation. It is rarely seen on the ocean or other bodies of deep salt water except during severe cold spells when the few wintering birds are frozen out of their fresh-water haunts. Over the larger part of our region the bird is known only as a fairly common transient visitant. It is decidedly uncommon as a summer resident, breeding thinly and sporadically on the least-molested ponds and open marshes of New Jersey, Westchester County and Long Island. An analysis of all recent reports indicates some thirty-three breeding pairs, but I have been requested by local leaders to refrain from giving detailed breeding localities.

The Pied-billed Grebe ordinarily arrives from the south around the middle of March. Most of the birds pass through during April, and migration is virtually concluded by the second week in May. This spring flight is usually very light, and in many localities it often goes unrecorded. Though the species occasionally nests in small colonies, in our region one or two pairs in any one locality are usually the limit. The nest is placed on a small mound just a few inches above the water. There is one brood, rarely two: local egg dates concentrated in May, with extremes April 22 and June 26. Fall migration sometimes begins around the middle of August, but it is not until the first cool weather in September that any widespread movement sets in. The species is at maximum abundance for the entire year in October. During this month the bird is widely distributed, and one may reasonably expect to find two or more individuals during any full day of birding around fresh-water localities. During exceptional flights I have seen as many as seventeen in a day on Long Island. By early November the Pied-billed Grebe generally disappears from the interior, but near the coast a few regularly linger into December, and on the south shore of Long Island one or two irregularly remain throughout the winter.

PUFFININAE: SHEARWATERS

Sooty Shearwater*Puffinus griseus* (Gmelin)

All of our shearwaters are pelagians, and their exact status off shore still requires clarification. This species nests in the Southern Hemisphere and after the breeding season comes to us as a summer visitant. It is said that the Sooty Shearwater is more regularly seen near the coast than in the open ocean, while the opposite is true of our other species. If this is a fact, then the Sooty is by far the rarest of the three regular shearwaters locally, as during a year we usually have more records for the Greater Shearwater and always many times the number of records for the Cory's Shearwater. For the present we can consider this species a regular summer visitant off our coast. The large majority of records come from eastern Long Island. It must be emphasized that unless one takes special pelagic trips one may well go for several years without seeing this species in our region. The bird irregularly wanders into the eastern end of Long Island Sound, but there are no records farther inland.

The Sooty Shearwater has been seen off Jones Beach, Long Island, as early as May 19, 1934 (Carleton and Sedwitz). A pronounced movement evidently passes by our shores during the last few days of May and the first half of June, since the majority of local records are concentrated during this period. One considers oneself fortunate to see a single individual of this species in our region, but occasionally small groups are encountered, and Dr. Helmuth reports that at Southampton, Long Island, from May 31 to June 3, 1928, the birds were "positively abundant and could be seen from the dunes resting in large flocks on the water just beyond the breakers. Fairly large numbers of Greater Shearwaters were also seen but the Sooties were observed literally by the hundreds." The species remains as an off-shore visitant until the end of Aug-

ust. After this month the bird is very rare, yet a few irregularly linger to the end of September, and I find a record of one from Jones Beach, Long Island, as late as October 16, 1932 (Breslau and Sedwitz).

Manx Shearwater

Puffinus puffinus puffinus (Brünnich)

An accidental visitant from Europe. A specimen picked up dead on Fire Island Beach, Long Island, August 30, 1917, by Henry Thurston, is now in The American Museum of Natural History.

Audubon's Shearwater

Puffinus lherminieri lherminieri Lesson

This small shearwater is an accidental visitant from the south. One specimen was taken in Great South Bay opposite Bellport, Long Island, on August 1, 1887 (Dutcher), and another was picked up dead at Long Beach, Long Island, on July 24, 1938 (Lind and Rorden). There are also two records for the New Jersey coast south of our region.

Greater Shearwater

Puffinus gravis (O'Reilly)

This is another species that breeds in the Southern Hemisphere and comes to us as a summer visitant. The only way to be sure of seeing this bird in our region is to go at least several miles off shore in a boat. Though infrequently seen from the land, there are now records for numerous points along the coast, and a listing of such places and dates seems superfluous. An analysis of all records indicates that the bird is much less often seen from our shores west of Fire Island, and many a season passes without a record for this section. Away from the ocean and the extreme eastern end of Long Island Sound, the bird is unknown.

The Greater Shearwater has been seen off East Hampton, Long Island, as early as May 4, 1937 (Helmuth), but this date is abnormally early as the bird seldom arrives before the third week of this month. The peak of abundance for the entire year comes during late May and early June, at which time tremendous flights have been observed far off shore. The species remains in lesser numbers throughout the summer, but its movements seem to be correlated with the movements of fish and squid, and consequently its status for any one summer varies considerably. A pelagic trip during the summer will generally produce a half dozen of these birds and occasionally flocks of several hundred. By September most of our Greater Shearwaters have departed. A few linger into October and I find a report for Montauk Point, Long Island, as late as November 6, 1932 (Sedwitz *et al.*).

Mediterranean Shearwater

Puffinus diomedea diomedea (Scopoli)

Further investigations may well reveal that this European relative of the Cory's Shearwater is not by any means as rare off our coast as the few records now suggest. Dr. R. C. Murphy records four specimens in the Dwight collection taken on Long Island: two birds at Montauk Point, August 15, 1907, and two off Amityville, October 4, 1902. Dr. Helmuth picked up a dead specimen at Montauk Point in early October, 1938.

Cory's Shearwater

Puffinus diomedea borealis Cory

This largest of our shearwaters breeds in the Northern Hemisphere on the Azores, Madeira, Salvage and Canary Islands, and it is therefore in an entirely different category from the Greater and Sooty Shearwaters that breed far south of the equator. Whereas the two Southern Hemisphere birds

are most common from late May to the end of June, this species is purely casual even in late June, and is most common from early August to the end of October. Being another pelagian, it is unknown in our region away from the ocean and the eastern end of Long Island Sound. It approaches our shores most frequently at the eastern end of Long Island. Records for this species progressively decrease as one works southwestward down the coast, and beyond Jones Beach the bird may be unrecorded in our region for years at a time.

The Cory's Shearwater has been seen off Mastic, Long Island, as early as June 26, 1937 (J. T. Nichols), and off Oak Island Beach, Long Island, as early as June 27, 1937 (Carleton and Sedwitz), but these dates are very early as the species seldom arrives before mid-July and is rarely here in numbers before August. During August, September and October a boat trip at least ten miles off the eastern end of Long Island should produce from one dozen to five hundred or more birds. But this is the one shearwater one does not have to take a pelagic trip to see, for annually large autumn concentrations, chiefly in October, occur between Long Island and Cape Cod, and hundreds may often be seen gracefully wheeling and milling around Montauk Point. The number one will see on any one day depends on the movements of fish and the temper of the weather. After early November the Cory's Shearwater becomes increasingly rare, and the latest records I know of are both from Long Island: Long Beach, November 22, 1936 (Cruickshank), and Montauk Point, November 29, 1889 (Dutcher).

Black-capped Petrel

Pterodroma hasitata (Kuhl)

An accidental straggler from the southern seas which has been found but once in our region: specimen, Quogue, Long Island, July, 1850 (G. N. Lawrence).

FULMARINAE: FULMARS

Atlantic Fulmar*Fulmarus glacialis glacialis* (Linnaeus)

This northern species has occurred in our region on at least three occasions. One specimen was picked up in an exhausted condition in Ridgewood, New Jersey, after a storm in early December, 1891 (Hales). Dr. Helmuth saw one in Mecox Bay, Long Island, on October 3, 1930, and John Mayer saw a light-phased adult just beyond the breakers at Rockaway Point, Long Island, on October 13, 1937.

HYDROBATIDAE: STORM PETRELS

Leach's Petrel*Oceanodroma leucorhoa leucorhoa* (Vieillot)

Even though this is the only petrel nesting on our Atlantic coast, breeding fairly commonly on islands off Canada and Maine and sparsely as far south as Massachusetts, it is indeed a rarity in the New York City region. This is due to the fact that the bird is strictly pelagic and is usually recorded only when blown ashore by violent storms. The eleven local records are: Fire Island, May 4, 1888 (Dutcher); Montauk, May 30, 1889 (Mulligan); Montauk, June 15, 1890 (Scott); Quogue, 1850 (Dutcher); Montauk, July 27, 1889 (Gurnett); New Rochelle, July 28, 1938 (Rich); Seabright, September 9, 1931 (F. Allen); Mt. Sinai, October 21 and 22, 1904 (Murphy); Hoboken, November 3, 1861 (W. Cooper); Far Rockaway, November 8, 1933 (Orth). All of these records but the one off Seabright are substantiated by specimens.

Wilson's Petrel*Oceanites oceanicus* (Kuhl)

This little Mother Carey's Chicken from the Southern Hemisphere is a fairly common to abundant summer visitant off shore, frequently entering the wider stretches of Long Island Sound and New York Bay but only infrequently

wandering into the smaller bays and up the Hudson River as far as Irvington. One of the best ways to see this species is to take a trip on one of the regular summer excursion boats from New York City to Sandy Hook or the Atlantic Highlands.

The Wilson's Petrel has been recorded at Orient, Long Island, as early as May 29, 1915 (Latham). The species ordinarily arrives in a marked wave during the first half of June, and it is usually mid-June before one may expect to find this bird in large flocks. Numbers seem to vary considerably from year to year, but one may reasonably expect to see from twenty to several hundred birds on any full day's oceanic trip during the summer. A large flight came into lower New York Bay on the remarkably early date of June 1, 1937, and estimates ranging from thirty thousand to one hundred thousand birds were reported (F. Allen, Breslau *et al.*). Bicknell, describing a flock off the beach opposite Hewlett, Long Island, on August 3, 1922, reported "thousands and thousands rising sometimes like a low, black cloud about one mile long." It must be added, however, that during some summers the number of Wilson's Petrels present is very small and unless an ocean trip is taken one may well pass an entire summer along our beaches without seeing the species at all. With the coming of September the Wilson's Petrels rapidly depart, and by the middle of the month all of the birds have ordinarily left for their breeding grounds down near the Antarctic. The latest record before me is from Orient, Long Island, September 29, 1933 (Latham).

PHAETHONTIDAE: TROPIC-BIRDS

Yellow-billed Tropic-bird

Phaethon lepturus catesbyi Brandt

As a result of the devastating hurricane of 1938 specimens of this beautiful species were sprinkled over the northeast. Three birds were recorded in our region. One was seen flying

over Jones Beach, Long Island, on September 25 (Brennan, Tengwall and Russell), and two were picked up dead at East Hampton, Long Island, in October (Helmuth).

PELECANIDAE: PELICANS

White Pelican

Pelecanus erythrorhynchos Gmelin

According to reports the White Pelican was of regular occurrence in the northeast in Colonial days. Its occurrence to-day would be purely fortuitous. A specimen collected in Canarsie Bay, Long Island, years ago is now in the collection of the Long Island Historical Society. Another specimen was taken at Roslyn, Long Island, May 11, 1885 (West). I find three reports of birds seen within the past sixty years, but in each case the observer was inexperienced, and the October and February dates force one to suspect that the birds were Gannets.

Brown Pelican

Pelecanus occidentalis occidentalis Linnaeus

An accidental straggler from the south. A specimen was collected off Sandy Hook about 1837 and recorded by DeKay. I find five sight identifications from Long Island: East Marion, August 28, 1902 (Latham); Jones Beach, May 26, 1912 (Johnson and Griscom); Montauk, July 30, 1927 (Latham); Southold, September 1, 1932 (Latham); Rockaway Point, May 10, 1936 (Buske *et al.*). There are, moreover, about six records for the New Jersey coast south of our boundaries.

SULIDAE: BOOBIES AND GANNETS

White-bellied Booby

Sula leucogaster leucogaster (Boddaert)

One record. A specimen taken on Moriches Bay, Long Island, many years ago is now in the collection of the Long Island Historical Society.

Gannet

Moris bassana (Linnaeus)

This is another species that rarely occurs away from the ocean and the eastern end of Long Island Sound. In these localities it is regularly seen from the shore and is common during migrations and rare in winter. It only irregularly enters the western half of the Sound and is purely casual inland. I find a record for Newark Bay, October 1, 1930 (Umer), and three records for the Hudson River: Englewood, October 16, 1915 (J. T. Nichols); Riverdale, October 31, 1925, and January 18, 1927 (Cruickshank). By far the best place around New York City to see this species is at Montauk Point where, during the height of migration in November, it is often positively abundant. I have frequently seen hundreds and once saw several thousand birds diving in spectacular fashion just beyond the surf.

The Gannet has been seen off Long Beach, Long Island, as early as August 4, 1921 (Bicknell), and there is a sprinkling of dates later in this month. The species is purely casual before mid-September, however, and is never here in numbers until the third week in October. Subsequently the bird becomes increasingly common until late in November when maximum abundance for the entire year is reached. Hundreds of birds regularly linger through December, but by January only stragglers remain. In mid-March the northward movement sets in, and the bird becomes increasingly common until the spring peak is reached in April. It is interesting to note that during the early part of the spring migration the large majority of the birds passing by are in full adult plumage whereas toward the end the large majority are mottled immatures. By the fourth week in May migration has ordinarily concluded, yet stragglers have lingered off Long Beach, Long Island, as late as June 2, 1921 (Bicknell).



PHALACROCORACIDAE: CORMORANTS

European Cormorant*Phalacrocorax carbo carbo* (Linnaeus)

Until recent years this large shag did not winter regularly south of New England. Griscom listed only one definite record, a specimen taken off Amagansett, Long Island, October 15, 1904, by H. Mulford and now in the Dwight collection. During the last decade the bird has become much more regular, and a few adults are now seen annually along the coast from October to May. Nevertheless the species still remains one of our rare winter finds.

With the steady increase in wintering Double-crested Cormorants, countless sight reports of immature European Cormorants have been handed in, some as far inland as the western end of Long Island Sound and the Hudson River. Unquestionably many of these reports are correct, but I state unequivocally that most of them are not. On the authority of such sight reports the European Cormorant is now a fairly common visitant along our coast from late August through May, and there are even a dozen reports of birds throughout the summer, a remarkable fact, if true, as the species is even casual in summer off Massachusetts where it winters in large numbers.

It must be emphasized that the plumages of immature cormorants are very variable and puzzling and, in spite of detailed points of identification often presented as conclusive, to separate an immature *carbo* from an immature of its abundant relative at any distance, even by the most expert of observers, is a delicate task. The size criterion often stressed becomes rather weak as a field character when one realizes that a small European Cormorant is smaller than a large Double-crested Cormorant and that the latter species may vary as much as six inches in length. Until backed by collected specimens the *exact* status of this species in our region must remain open to conjecture.

Double-crested Cormorant*Phalacrocorax auritus auritus* (Lesson)

Now that this species has reestablished itself as a breeding bird on the Maine coast, and over one thousand nests are found annually as far south as Muscongus Bay, it has become an abundant migrant along our shores. On the ocean front, on the larger bays and on the wider stretches of Long Island Sound the bird is generally abundant during migrations and rare but regular both summer and winter. Though it is ordinarily uncommon to rare in the interior and seldom alights there, years of intensive birding have given us numerous records for the Hudson River and most of the larger lakes and reservoirs. It is usually recorded inland only during the height of migrations, especially in late April and May, when flocks of up to several hundred birds are regularly seen flying high overhead. This movement accounts for the large number of reports of migrating *geese* at this season.

The first lines of cormorants are ordinarily seen flying down our coast around the middle of August. Numbers progressively increase until the first heavy frost in early October when a fall peak is reached. Subsequently numbers drop off. Yet flocks regularly linger into December and small groups regularly remain throughout the winter. With the coming of April the return flight sets in and by the fourth week in the month maximum abundance for the entire year is reached. At this season I have seen over five thousand birds in a single morning passing over Jones Beach in long wavy lines and angles looking like so many coal-black, silent *geese*. As May progresses the cormorants fall off in numbers, and by early June migration has normally concluded. Each year more and more immature birds summer, but even so the species is still uncommon at this season.

FREGATIDAE: MAN-O'-WAR BIRDS

Man-O'-War Bird*Fregata magnificens* Mathews

This beautiful maritime bird is an accidental straggler from the tropics. There are two definite local records: Faulkner's Island, 1859 (Grinnell), and Gardiner's Island, August 4, 1886 (Dutcher).

On September 5, 1934, Doctor William T. Helmuth received reports from two different sources in East Hampton, Long Island, of birds that were in all probability this species. It seems unlikely that two separate observers on the same day would think they saw such an accidental straggler if it were not so. One of the observers, Doctor Helmuth's son, had seen this species in Florida and was certain of his identification. A specimen was shot just outside of our region on Block Island on November 16, 1932, and there are two recent sight records from the New Jersey coast to the south of us.

ARDEIDAE: HERONS AND BITTERNS

Great Blue Heron*Ardea herodias herodias* Linnaeus

In spite of unwarranted persecution by "sportsmen" who all too frequently use this large attractive heron as a target, it has been holding its own. It is equally at home around fresh, salt or brackish water, but in our region it is most common near the coast. On the extensive salt marshes near the ocean, in Newark Bay and along the Sound the species is a common transient visitant, an uncommon non-breeding summer resident and a very rare but regular winter resident. Over the larger part of the interior it is regular during migrations but generally rare as a non-breeding summer resident and purely casual in winter. In 1940 Mr. C. Brown discovered a small colony of twelve pairs in Sussex County, New Jersey,

and he suspects the existence of a second colony elsewhere in the northwestern corner of the state. I can find no other nesting data for our region.

The Great Blue Heron regularly arrives from the south during the first week in April, and what may hesitatingly be called a spring peak is reached towards the end of this month. By mid-May migration has virtually concluded, yet a few non-breeding birds are present throughout the summer. Our only breeding colony has already been discussed. Fall migration commences as early as the second week in July. Subsequently numbers increase until September when the species is usually at its peak of abundance for the entire year. In our region, however, the Great Blue Heron never occurs in large numbers, and a count of more than two dozen individuals on any one day is indeed unusual. Numbers fall off with each successive freeze, and by December the bird is purely casual inland. On the larger coastal marshes and around a few places such as Playland Pond in Westchester County, small groups linger through December, and a few regularly remain throughout the winter.

American Egret

Casmerodius albus egretta (Gmelin)

The American Egret stands as a glowing example of what adequate protection can do. Brought to the verge of extinction by plume hunters toward the end of the nineteenth century, it was recorded on Long Island only seven times between 1880 and 1900. Laws protecting it were passed just in time. Since 1915 it has shown a steady increase, and it now nests regularly as far north as southern New Jersey. To-day it is a locally common to uncommon summer visitant in our region wherever there are extensive marshes and unmolested margins of bays, estuaries, rivers, lakes and ponds. Though impartial to fresh or brackish water, the species is most com-

mon along the coast and is rather local in distribution throughout the interior.

The American Egret has been seen at Montauk, Long Island, as early as March 31, 1932 (Woodmere Bird Club), and at Dyker Heights, Brooklyn, as early as April 3, 1941 (Hix). Though the bird is always very uncommon in spring, years of intensive birding have given us numerous records for late April, May and June. The real flights or post-nuptial wanderings ordinarily arrive in late June or early July. There are definite flight years which can probably be correlated with water conditions to the south. Throughout July, August and September the bird is often locally common, and I have seen over fifty in a day along the Jones Beach stretch in early September. With the first heavy frost in early October most of our American Egrets go south. A few irregularly linger to the end of this month, and one bird was seen at Jones Beach, Long Island, as late as November 8, 1936 (Cruikshank and J. Elliott).

Snowy Egret

Egretta thula thula (Molina)

Griscom, writing in 1923, stated: "In former times Giraud regarded this species as not uncommon on Long Island from 'late in the spring till the last of September and it undoubtedly bred.' Small companies of these birds were recorded every year from 1881 to 1885, since when no specimens have been taken on Long Island to my knowledge. The Snowy Egret is consequently extirpated as a summer resident and its occurrence at the present time would be purely accidental. Many years ago Dr. A. K. Fisher collected a casual individual at Ossining."

Thanks chiefly to the efforts of the National Audubon Society this beautiful species has been saved, and in the last few years it has reestablished itself as a breeding bird as far north as southern New Jersey. To-day it must be regarded



as an uncommon but regular summer visitant in our region. It can be expected with any degree of certainty only on the larger coastal marshes, although each year we have an increasing number of records from ponds, streams and swamps away from the coast.

It is possible that another decade might see the Snowy Egret reestablishing itself as a breeding bird on Long Island. I have seen individuals in the large night heron colony near Massapequa as early as April 20, 1939. There are now numerous records for May and June, but it is not until the post-breeding wanderings in July and August that the species is regularly encountered. Though usually found singly, it occasionally occurs in small flocks as large as twelve. After the first light frost in late September the Snowy Egret is very rare, but on the coast a few individuals linger into October. In 1939 one bird was seen at Long Beach, Long Island, as late as November 16 (Cruickshank), and another remained along the Jones Beach pond until early December and was seen by numerous observers.

Louisiana Heron

Hydranassa tricolor ruficollis (Gosse)

This southern heron has always been accidental in our region. Griscom knew of but one record, a specimen collected near Patchogue, Long Island, in the summer of 1836. In the last fifteen years the bird has been occurring more regularly north of Virginia, and I find the following recent local records:

LONG ISLAND. East Hampton, May 28, 1933 (Helmuth); Montauk, June 26, 1925 (Ellis), and April 1, 1932 (Woodmere Bird Club); Orient, September 15, 1927, July 9, 1939, December 1, 1940, September 28, 1941 (Latham); Georgica Pond, August 9 and 10, 1929 (Helmuth); Jones Beach, August 20, 1930 (Woodmere Bird Club); Jamaica Bay, September 8, 1938 (Imhof).

STATEN ISLAND. Oakwood Beach, August 2, 1930 (Johnston), May 16, 1936 (Norse, Karsch and Gell-Mann).

NEW JERSEY. Newark Meadows, August 13, 1930 (Urner), August 25, 1930 (Kuerzi), July 26, 1933 (Kessler). In addition there are at least seven records for the New Jersey coast to the south of us.

Little Blue Heron

Florida caerulea caerulea (Linnaeus)

Twenty years ago the Little Blue Heron was considered a rare or casual visitant in the New York City region. Like all of our southern herons it has, however, responded remarkably to protection, and it now nests regularly as far north as southern New Jersey and has even been found breeding in Massachusetts. To-day in our region it is a locally common summer visitant on the coastal marshes as well as on the large fresh-water marshes inland. It occurs rather regularly, though in smaller numbers, around lakes, ponds, rivers, wet meadows and swamps throughout the interior.

Two immature Little Blue Herons were seen around the Hempstead Reservoir, Long Island, on the remarkably early date of March 19, 1934 (Terry). The species has arrived at Far Rockaway, Long Island, on April 3, 1885 (Lawrence), and at Mastic, Long Island, on April 3, 1926 (J. T. Nichols), and there is now a light sprinkling of dates for the remainder of April and May. Singularly the majority of Little Blue Herons recorded in our region in spring are adults. It is not, however, until the post-nuptial wanderings in July and August that the species arrives in any numbers. At this season there is a preponderance of white immatures, adults in the dark plumage usually constituting less than five per cent of the total population. Numbers vary considerably from year to year. Some years the flight is so poor that many large sections are without a single record. Some years the bird is much more common than the American Egret, and it is occasionally encountered in flocks of over one hundred. The largest local concentration occurred on the Newark Marshes on Septem-

ber 3, 1930, when 239 birds were counted (Urner). After the first frost in September the Little Blue Heron is a very rare bird, yet one or two occasionally linger into October. The latest local records are: Bridgehampton, Long Island, October 27, 1940 (Pettit), and Jones Beach, Long Island, November 6, 1938 (Rose and Terry).

Eastern Green Heron

Butorides virescens virescens (Linnaeus)

This smallest of our true herons is, with the possible exception of the Black-crowned Night Heron, the best known and most widely distributed member of its family around New York City. It is indeed an adaptable bird. Whether it be the edges of the wide coastal marshes or the banks of some half-choked pond in the interior of New Jersey, one may be reasonably certain of finding this species during the summer months. It shows no partiality towards fresh or salt water. It will nest singly or in small colonies in the low poison ivy thickets of the outer strip, high in the climax woods of the interior and even far from water in some orchard or ornamental conifer next to a house. Whereas it is a common summer resident over the larger part of our region, this species never occurs locally in large concentrations. Moreover it is very easily overlooked and seldom does one see over two dozen individuals even during the most favorable days in the most favorable localities. My highest count for a full day's trip on Long Island is only thirty-seven.

The Green Heron has arrived at Speonk, Long Island, as early as April 1, 1935 (Wilcox), and at Hewlett, Long Island, as early as April 3, 1940 (Lawrence School Nature Club). The first widespread wave generally arrives by the end of the third week in April, and a spring peak is reached during the initial week in May. By the end of this latter month migration has normally concluded and only stragglers are passing through as late as the first week in June. There is

generally one brood, rarely two, local egg dates concentrated in late May and early June, with extremes May 2 and July 15. During August and September nights amongst the chirps of migrating passerine birds many southbound Green Herons may be heard giving their diagnostic hollow croaks. With the first heavy frost in early October the species disappears from the interior and becomes rare near the coast. Very few birds linger into November. One individual was seen in Mecox Bay, Long Island, on November 26, 1937 (Wilcox), and another extraordinary individual remained at Jones Beach, Long Island, until December 12, 1934, and was seen almost daily by a score of observers.

Black-crowned Night Heron

Nycticorax nycticorax hoactli (Gmelin)

The Black-crowned Night Heron like all members of its family is essentially a bird of wet grounds, and its distribution is therefore governed to a great extent by the distribution of bays, rivers, estuaries, lakes, ponds, streams, marshes and swamps. Over the larger part of the New York City region it is common during migrations, common as a non-breeding summer resident and extremely local in winter. The distribution of breeding colonies still needs investigation. In 1935 there were twenty known heronries on Long Island with a total population of over three thousand pairs. At the date of writing five of these colonies have been destroyed, others have been reduced, but three new colonies have been discovered, and the known breeding population remains roughly the same. At least ten pairs nested near Tuckahoe, Westchester County, in 1935 and 1936, but birds have merely roosted there in recent years. It is inconceivable that there are no colonies in Westchester or Rockland Counties. Likewise in New Jersey our information is scant, the only known breeding colonies at present being a group of about one

hundred pairs near Boonton and a group of fifty pairs on Sandy Hook. There are, of course, many times more Black-crowned Night Herons present in our region during the summer than listed in this breeding information. A large percentage of our summer population consists, however, of first-year birds or non-breeding adults, a great many undoubtedly visitants from southern heronries.

A few Black-crowned Night Herons irregularly show up on their breeding grounds in early March, but the species generally arrives in a pronounced wave towards the end of the third week in this month. Migrants are passing by throughout April and even May. Suitable nesting environment is astonishingly varied, but the majority of our local heronries occur either in cedar thickets having a protective entanglement of smilax, in flooded red maple-tupelo woodlands, or in fairly open mixed hardwoods showing a predominance of oak or birch. Locally there is but one brood, egg dates concentrated in the last half of April, with extremes April 7 and July 7. By the end of June the majority of young birds are on the wing. The species remains common until the first killing frost in early November when most of the birds leave for the south. Some five hundred individuals remain throughout the winter. Most of these wintering birds concentrate in fifteen definite and primarily long-established roosts. Away from such roosts and the adjacent feeding grounds the species is purely fortuitous at this season.

Yellow-crowned Night Heron

Nyctanassa violacea violacea (Linnaeus)

Twenty years ago the Yellow-crowned Night Heron was considered a casual visitant from the south, and Griscom knew of but eight records of its occurrence. To-day dozens of records for this species are turned in annually, and it may now be considered an uncommon but regular summer visi-



tant. Most of the records are concentrated along the large coastal marshes, but each year increasing numbers are reported from ponds and swamps in the interior. Just after the turn of the century Mr. C. D. Brown collected a few young Night Herons near Rutherford, New Jersey, for the Bronx Zoo. When these birds reached full growth William Beebe, then curator, identified one as a young Yellow-crowned Night Heron. This, I believe, is the first time this information has been published. While exploring a swamp near Massapequa, Long Island, on April 14, 1938, I came upon two pairs of Yellow-crowned Night Herons repairing old nests. By May 10 four pairs were in this area, each with a nest containing five eggs. As far as I am able to ascertain this is the first breeding record for this species in New York State. In 1939 and again in 1940 the birds returned but were frightened off by mosquito drainage operations. They moved a short distance away and bred successfully. A nest with three eggs was found at Great Neck, Long Island, in May, 1941 (Kimball). In recent years Mr. Latham has seen birds at the eastern end of Long Island during the breeding season, and he suspects that they nest there. The species undoubtedly breeds elsewhere in our region, and observers should be on the lookout for such localities.

The Yellow-crowned Night Heron has arrived at Jones Beach, Long Island, as early as March 19, 1933 (Harrower), and in several localities during the fourth week of this month. It is, however, a rare bird before July, when a light but definite flight comes to us from the south. The species is most common and most widely distributed during August. After the first light frost in September the Yellow-crowned Night Heron is purely casual, yet birds irregularly linger into October, and I find a record for Bayside, Long Island, November 2, 1940 (Reid), and one for Prospect Park, Brooklyn, as late as November 16, 1937 (Shainin).

American Bittern*Botaurus lentiginosus* (Montagu)

The American Bittern is partial to marshes, swamps and wet meadows where a good supply of open water and quaking margins makes its retreat inaccessible to man. It is widely distributed throughout the region from the outer strip of Long Island to the small bogs in the highlands of north-western New Jersey, but its distribution is governed entirely by suitable habitat, and away from such grounds it is rare or unknown. The species is a fairly common transient visitant and decidedly rare in winter. As a breeding bird it is uncommon in all but a very few choice localities, and it is steadily decreasing. In recent years nests have been found at several points in the larger unmolested swamps of New Jersey and along the south shore of Suffolk County, and surprisingly few nests have been found in Westchester, Rockland, Nassau and Queens Counties. By far the best remaining spot near New York City to hear the bird "pumping" is on the Troy Meadows in New Jersey. As drainage operations and so-called improvements to our marshlands continue, this shy heron becomes extirpated as a summer resident near the metropolis and its suburbs. It might be more widely distributed as a breeder than we believe, however, for it is extremely secretive and wisely keeps far within the sanctuary of its sloppy haunts.

In mild seasons a few bitterns trickle into our region late in March. The species arrives with great regularity during the second week in April, and most birds pass through before the middle of May. During this period it can best be located by its hollow "pumping", which comes most frequently during twilight and daybreak. The species with rare exceptions nests on the ground and has but one brood, local egg dates concentrated in the first half of May, with extremes April 26 and June 12. In August and September our population is aug-

mented by migrants, but maximum abundance is not reached until October. The habits of the American Bittern render an accurate estimate of its abundance impossible. Even in the choicest localities it is very unusual to record over ten individuals on any one day. During November the large majority of birds depart, but along the coast a few regularly linger through December, and one or two rarely remain to brave the winter in some spring-fed or brackish marsh.

Eastern Least Bittern

Ixobrychus exilis exilis (Gmelin)

Even more secretive than most rails and confined almost exclusively to thick beds of cat-tails, pickerel weeds, arrow-heads and other aquatic plants, this tiny, thin bittern is generally known only by those who are willing to wade and push their way waist deep into the heart of the marsh. Because it can be so easily overlooked and, except from a few choice localities, is so seldom reported, the exact status of this bird as a transient and as a summer resident cannot be stated with any degree of certainty. It can be definitely asserted, however, that in our region its breeding is confined to the fore-mentioned habitat, and as this type of marsh disappears the Least Bittern, too, will disappear.

Until very recent years the bird bred in small colonies in Bronx, Kings, Queens and Nassau Counties, and a few pairs still hang on there. At present it is a rare local summer resident and transient in the New York City region. There are at least five breeding stations in our portion of New Jersey, six on Long Island and apparently but one in the remainder of our portion of New York State. By far the most likely place to see this species locally is on the extensive Troy Meadows in New Jersey where some thirty pairs breed.

The Least Bittern has been recorded in Troy Meadows, New Jersey, as early as April 21, 1929 (Urner), and in Van Cortlandt Park, Bronx County, as early as April 23, 1939

(Norse). Migration takes place chiefly in late April and early May. The nest is generally suspended in dense vegetation just above the water. Locally there is usually one brood, possibly sometimes two, egg dates concentrated in late May and early June, with extremes May 17 and July 16. The best way to locate nesting sites is to visit likely-looking habitat in May and listen for the soft, almost imperceptible cooing. Fall migration evidently begins early in August and extends into September. The species has been seen in Bronx County as late as October 2, 1927 (Cruickshank), and in The American Museum of Natural History there is a bird collected in Long Island City on the remarkable date of December 12, 1895.

CICONIIDAE: STORKS AND WOOD IBISES

Wood Ibis

Mycteria americana Linnaeus

An accidental visitant from the south. A specimen was taken at East Marion, Long Island, June 21, 1890 (Dutcher). There are two twentieth-century records for Cape May County, New Jersey.

THRESKIORNITHIDAE: IBISES AND SPOONBILLS

Eastern Glossy Ibis

Plegadis falcinellus falcinellus (Linnaeus)

An accidental visitant from the south. There are two old records: specimens taken at Southampton, Long Island, September 12, 1847 (Dutcher), and at Canarsie, Brooklyn, October 10, 1848 (Dutcher).

A single bird was discovered in the Van Cortlandt Park swamp on May 13, 1935 (Wiegmann). It remained for three days and during its stay was chased from one end of the swamp to the other by scores of frantic bird students. Possibly

the same bird took refuge in the wilder, more extensive marshes at Troy Meadows, New Jersey, for an individual of this species was seen there on May 26, 1935 (J. L. Edwards). Another was carefully studied in Troy Meadows on May 21, 1939 (J. L. Edwards), and one was seen flying over the ocean at Jones Beach, Long Island, on August 15, 1937 (Carleton, Sedwitz, Shainin, Stephenson).

In recent years there have been marked flights just to the south of us, and there are now many records for southern New Jersey.

White Ibis

Guara alba (Linnaeus)

Another accidental visitant from the southern states. Giraud recorded two specimens taken on Long Island: Raynor South, summer of 1836; Moriches, early part of March, 1843.

PHOENICOPTERIDAE: FLAMINGOS

Flamingo

Phoenicopterus ruber Linnaeus

I find two records for this species from Long Island, both of which are undoubtedly of specimens which escaped from some park or aviary. One bird was shot by duck hunters at Speonk about 1915 and the mounted specimen is now in West Hampton. The other bird was collected on Shinnecock Bay, October 3, 1931 (Wilcox). I present these two records for what they are worth and suggest that for the present the Flamingo be kept off the New York City region list as its occurrence in a wild state within our boundaries is unquestionably hypothetical.

CYGNINAE: SWANS

Mute Swan*Sthenelides olor* (Gmelin)

This is the swan with the orange bill and the overhanging black tubercle that one sees commonly about parks and estates throughout the region. It is an introduced species from the Old World. Young birds have escaped from various sources and when mature have nested in the extensive marshes and bays, especially along the south shore of Long Island. A few pairs are found sprinkled through the interior. To-day there are actually several hundred feral birds in our region, and during severe cold weather when they are forced to congregate on the little open water in Shinnecock, Moriches and Great South Bays I have counted over two hundred in one flock. Each year these free birds multiply and wander, and each year it becomes increasingly common to see Mute Swans flying over all sections but the interior of New Jersey. At present it is a much more common bird in our region than the native Whistling Swan.

The Mute Swan is a permanent resident. A few birds migrate, principally those from up the Hudson and from the small ponds and marshes that regularly freeze. Ordinarily its nest will be placed along the edges of ponds or in shallow sections of marshes. There is but one brood, local egg dates concentrated in the last half of April, with extremes March 30 and June 12.

Whistling Swan*Cygnus columbianus* (Ord)

In Colonial times the Whistling Swan was apparently a regular transient visitant. Around 1640 DeVries reported swans on New York Bay with ducks and geese. Griscom,

writing in 1923, listed only four definite records for Long Island.

Although the species has been steadily increasing during the last two decades, it is still decidedly uncommon in our region, and generally only vagrant individuals are encountered. This should not be interpreted as indicating the rareness of the bird. The normal flight-line unfortunately passes just west of our region, and large concentrations are annually reported from the Great Lakes area, on the lower Susquehanna River and from Chesapeake Bay southward to coastal North Carolina. At present local data are distributed as follows:

LONG ISLAND. Over three dozen reliable records, chiefly from the south shore. Though records are sparsely sprinkled throughout the winter, the large majority of them are concentrated in the last three weeks of November and the first three weeks in March, with extremes from Idlewild, November 5, 1935 (Lind), and Jones Beach, April 8, 1939 (Norse).

NEW YORK STATE. Croton Point, March 11, 1932 (Kuerzi); Baxter Creek, November 20, 1933 (Kuerzi); Hudson River off Nyack, winter of 1939-40 (Walsh).

NEW JERSEY. Newark Bay, November 5, 1935 (Urner); Watchung, November 6, 1935 (Hunn); a flock of sixteen flying south over Budd Lake, November 16, 1940 (Rusling).

ANSERINAE: GEESE

Canada Goose

Branta canadensis canadensis (Linnaeus)

The Canada Goose, with the Mute Swan and Mallard, is one of the characteristic birds of our parks, estates and sanctuaries. Some of these tame birds have escaped, bred in the wild with increasing success, and to-day feral descendants of these escaped pairs are regular throughout the year, especially on Long Island. These birds wander about and at times are even seen flying low over streets in crowded sections. On Long Island where they are most successful in nesting, complete



clutches of eggs have been found from April 3 to May 24. Naturally, in season, wild birds frequently drop in and enlarge the size of these semi-domesticated flocks.

The truly wild, wary Canada Goose is still a common transient along our coast, much less common in winter. Away from the coast it is uncommon, rarely alights, and is only irregularly seen flying over, chiefly during the height of migrations in March and November.

With the first light frost in late September the vanguards of the autumn flights appear. The first widespread movement generally comes on the heels of the first heavy frost in early October, and from then on flocks come with increasing frequency until the height of migration in November. From five hundred to two thousand birds regularly winter along our coast, the number depending to a large extent on the severity of the weather. This species might well be called the harbinger of spring, for as soon as the ice commences to break, usually in late February, a definite return migration sets in. These flights continue throughout March. During peak days the impressive living wedges and skeins stream across the sky. At night the sonorous chorus comes from the depths of the darkness. By mid-April most of the truly wild Canada Geese have left for the north and very few linger into May. The reports of large flocks of geese flying over in May invariably prove to be migrating cormorants. The Canada Geese reported as feral during the summer months are in most cases, at least, wanderers from the local breeding stock.

Every year we receive reports of small Canada Geese, a very few of which are possibly referable to one of the western subspecies. It must be remembered, however, that *canadensis* itself can vary as much as eight inches in length and even more in bulk. The Canada Goose is now divided into several critical subspecies, and it would be mere conjecture to suggest which of the smaller races, if any, occurs locally until there are specimens to support the statement.

American Brant*Branta bernicla hrota* (Müller)

No change in our local avifauna more clearly stresses the intricate interrelationships in nature than the catastrophe that has befallen the Brant. Formerly a common transient and an uncommon but regular winter resident along our coast, it remained as such until 1931 when the sudden disappearance of the eel grass (*Zostera marina*), its principal source of food in our region, was followed by an abrupt decline in the numbers of this small goose. For the next six years the Brant became increasingly scarce. Though a few local beds of the marine plant show minor signs of recuperation and the Brant is slowly increasing, there is no immediate hope for a return of the bird to its former numbers.

At present it is generally an uncommon transient and a rare winter resident along the coast, yet flocks of three thousand or more birds are occasionally seen at such points as Shinnecock, Moriches and Great South Bays on Long Island, and Barnegat Bay on the New Jersey coast. Away from the ocean, the larger coastal bays and the eastern end of Long Island Sound, the bird is practically unknown. It very irregularly strays into the western end of the Sound where it is seen from Nassau, Bronx and Westchester Counties. I find but three records for inland New Jersey: Newark Bay, January 12, 1924 (Urner), and May 27, 1939 (Eynon); a flock of eighteen on the Raritan River near Ford, March 20, 1938 (Cant and Eynon). A. K. Fisher recorded it as accidental at Ossining, and Brandreth reports another shot there in November, 1920. I have seen the species on the Hudson River between Riverdale and Englewood on two occasions, November 14, 1926, and January 4, 1932.

Though a few Brant irregularly arrive along our coast in September, it is usually not until mid-October that the southward migration sets in. Numbers gradually build up to maxi-

mum abundance in late November, and at this season thousands are even now occasionally recorded in choice localities. The species winters fairly commonly around Barnegat Bay, New Jersey, and sometimes in numbers along the south shore of Long Island. In the last decade the spring migration has changed remarkably. Formerly the northward movement started in late February, reached a peak in late March and was virtually concluded by mid-April. To-day only small flocks reach our region in late February or early March, and the bulk of the birds does not show up until mid-April. Some of these large flocks now linger into early May, and a few birds have even remained throughout the summer. This remarkable change in the migration schedule suggests undernourishment. All of our summer records come from along the south shore of Long Island, and since they have all occurred in the last ten years it is possible that they represent birds in too weakened a condition to take the long flight to their Arctic breeding grounds.

No serious student should fail to read the excellent account by Charles A. Urner of "The Eel Grass Blight on the New Jersey Coast" (*Proceedings of the Linnaean Society*, Nos. 43, 44, p. 37). It is probable that this bird will return to its former status, and all students are urged to keep detailed notes of the numbers and migrations from year to year so that we may have an accurate account of what takes place.

Black Brant

Branta nigricans (Lawrence)

An accidental visitant from the far west. Three specimens have been taken on Long Island: Islip, 1840 (Dutcher); Babylon, spring of 1889 (Dutcher); Babylon, March 31, 1908 (Herrick).

Barnacle Goose*Branta leucopsis* (Bechstein)

Griscom listed this species as an accidental visitant from Europe, citing two records for Long Island: Jamaica Bay, about October 20, 1876 (Lawrence), and Fire Island, October 12 to 16, 1919 (*Forest and Stream*, March, 1920).

The Barnacle Goose is regular in zoological parks, and the present-day records, at least, are open to unavoidable suspicion that they are only escapes from some aviary. George Hix discovered a bird at Overpeck Creek, New Jersey, March 20, 1926. It was seen by over a score of observers and was collected the following day. "While perfectly able to fly it was suspiciously tame and had perhaps escaped from some aviary." Another individual was chased and caught at Little Neck Creek, Long Island, on March 19, 1933 (Breslau and Sedwitz), and there is no doubt in my mind that this was but another escape. I also find a record of one with a badly bruised wing collected at Farmingdale, Long Island, November 28, 1922 (F. C. Willard). One was shot at Orient, Long Island, December 11, 1926 (Latham), and another was reported shot from a flock of Canada Geese over Shinnecock Bay during the same month and year (*vide* Latham).

White-fronted Goose*Anser albifrons albifrons* (Scopoli)

An accidental visitant from the west which has been collected on Long Island five times: Babylon (Giraud); Great South Bay, November, 1846 (Dutcher); Islip, March 18, 1849 (Dutcher); Montauk, March 2, 1872 (Dutcher); Sag Harbor, October 18, 1889 (Braislin). Arthur Helme saw a flock of eleven near Miller Place, April 5, 1883. In addition I know of two twentieth-century records for the Barnegat Bay area just to the south of us.

Lesser Snow Goose

Chen hyperborea hyperborea (Pallas)

This western species is apparently accidental on the Atlantic Coast. In Mr. Dutcher's Long Island collection are two specimens which fall within the dimensions given for this race: Shinnecock Bay, October 8, 1881, and Montauk Point, October 29, 1888. Mr. Urner, upon measuring the wing of one of three birds killed by his brother on the Newark marshes, New Jersey, October 29, 1917, found it to correspond to the measurements given for this race. The only recent specimen is one collected on Shelter Island, October 29, 1933 (Latham).

Greater Snow Goose

Chen hyperborea atlantica Kennard

I follow the precedent set by previous writers in assuming that all sight records of Snow Geese in our region refer to this subspecies, as the smaller bird is purely accidental on the Atlantic Coast.

The Snow Goose was formerly of much more casual occurrence than it is at the present time. Griscom called it a decidedly rare transient on Long Island and gave but one record for it elsewhere. In the last decade the bird has become fairly regular. There was a remarkable flight on November 13, 1933, on which date the species was recorded in flocks up to seven hundred at widely separated points on Long Island, from Flushing and Far Rockaway to Orient Point. A very few alighted and remained until early December; those collected proved to be *atlantica*. Since then the bird has occurred annually, and records are now far too numerous to list.

At present on Long Island the Snow Goose may be regarded as uncommon to rare but regular during migrations and of casual occurrence in winter. The bird has arrived at Jones Beach as early as September 24, 1937 (J. Elliott), and at

PL. 5. Snow Goose (*Chen hyperborea*)

These birds, rare in our region, flying in typical V-formation



Moriches as early as September 28, 1886 (Dutcher). It is, however, purely casual before mid-October, and the majority of records are concentrated in the first three weeks of November. The spring flight is very irregular and often missing, but it occurs principally during the first two weeks of April. Stragglers have lingered at Orient to April 27, 1931 (Latham).

Away from the coast, even though the species probably passes high overhead both spring and fall, it is generally overlooked. In our portion of New York State, excluding Long Island, I find the following records: several hundred, Ossining, April 8, 1882 (A. K. Fisher); small flock, Bronx region, April 11, 1926 (Kuerzi); Staten Island, April 17, 1926 (Kuerzi); Riverdale, March 9, 1929 (Cruickshank); 40, Van Cortlandt Park, November 18, 1936 (Karsch); 50, Pelham Bay, October 23, 1938 (Kramer). The normal flight-line apparently passes just to the west of us, and the bird is often abundant during migrations in southern New Jersey. In our portion of that state, however, I find only the following records: 37, Boonton, April 6, 1924 (Carter and F. E. Watson); 100, Troy Meadows, April 2, 1933 (Lind and C. K. Nichols); 100, Union, April 13, 1937 (Eynon); small flock, Montclair, November 13, 1938 (Edwards and A. S. Peterson); 350, Montclair, April 7, 1940 (Edwards); 900, Paterson, April 13, 1941 (Lang, Wolfarth *et al.*).

Blue Goose

Chen caerulescens (Linnaeus)

Though an extremely rare visitant to our region, years of intensive birding have produced over three dozen records for Long Island, and I can see no point in listing them in detail. The species has been recorded around Jamaica Bay, Jones Beach, South Oyster Bay, Great South Bay, South Haven, Moriches Bay, Shinnecock Bay, Mecox Bay, East Hampton, Amagansett, Montauk, Orient, Cold Spring Har-

bor, Bayville and Millneck. In early November, 1934, there was an extraordinary movement of this species down the Atlantic coast, with records turning up at various points from Maine to South Carolina. This flight produced at least ten local records, the largest a flock of nine. The species has been seen at Millneck as early as September 21, 1936 (Smigel), and at Jones Beach as early as October 9, 1938 (Cruickshank and J. Elliott). Records are concentrated in November, with only a sprinkling of dates throughout the winter. One bird lingered in Jamaica Bay to April 17, 1936 (Mayer), and a flock of ten was seen at Miller Place as late as April 28, 1883 (Helme). There are two very late records for Millneck, May 1, 1938 (Sabin), and June 8, 1937 (Smigel *et al.*).

Away from Long Island I find but one record for our region: a single bird on the Jersey City Reservoir at Boonton, November 26, 1939 (Cadbury and Hiatt). There are, however, numerous records for the New Jersey coast to the south of us.

ANATINAE: SURFACE-FEEDING DUCKS

Common Mallard

Anas platyrhynchos platyrhynchos Linnaeus

Tame birds originating from parks, sanctuaries, hunting clubs and estates now occur throughout the year and render it almost impossible to state with any degree of conclusiveness the exact status of the really wild Mallard in our region. These semi-domesticated birds even breed locally in a wild state, and eggs are regularly found in April and May, with extremes March 25 and June 30.

Even though the Mallard is primarily a bird of farther west, it cannot be doubted that truly wild birds occur in our region regularly, for there is a pronounced increase in all sections during migrations, and birds banded locally have

been recovered as far west as Ontario and Minnesota. At present the Mallard may be considered a fairly common transient wherever favorable habitat occurs. Though a surface-feeding duck and partial to fresh-water ponds and marshes, it is known for its adaptability and will alight with almost equal readiness in a brackish coastal creek, a swampy woodland or occasionally even in the middle of a dry grain field.

There are indications that truly wild Mallards trickle into our region during early September and occur in increasing numbers until November when the peak of the fall flight is reached. This bird never occurs locally by the thousands as it does in the west and even on the best "Mallard days" one is fortunate to see over one hundred individuals. While some wild birds winter, especially near the coast, they are by no means common at this season. There is a return flight from early March to mid-April. Summering birds, in all probability, are not truly feral.

Red-legged Black Duck

Anas rubripes rubripes Brewster

Common Black Duck

Anas rubripes tristis Brewster

The status of the Black Ducks in our region is still open to discussion. Being relatively near the area of transition between the breeding grounds of the Red-legged and Common Black Ducks we naturally get all sorts of intermediates between the types to confuse us. In fact observations at the Austin Ornithological Research Station in Massachusetts indicate that three races might be involved. Even in one subspecies itself the coloration of the bills, legs and feet varies considerably, and it is therefore very frequently impossible to make any worthwhile sight identification.

The Black Duck occurs commonly throughout the region wherever there is water. The breeding birds are widely distributed and in all cases have proven to be *tristis*. With the coming of late August the local population is definitely augmented by migrants from the north, but just when the majority of Common Black Ducks depart for the south, and the Red-legged Black Ducks arrive from the north is difficult to say, although indications are that the transition takes place chiefly during October. All through the winter the Black Duck is common to abundant and the majority of birds present are of the northern race *rubripes*. At this season, since most inland waterways are frozen over, the Black Ducks concentrate along the coast and at times are even seen resting on the ocean and the Sound in beds consisting of a thousand or more birds. In early March spring migration sets in, and within the next month the majority of Red-legged Black Ducks depart for the north and the Common Black Duck becomes the predominant form. I have found nests on the outer salt meadows of Long Island, in the fresh-water swamps of inland New Jersey, and even back in climax woodlands a mile or more from any large body of water. The bird nests on the ground. There is but one brood, local egg dates concentrated in April and early May, with extremes March 9 and July 16.

Gadwall

Chaulelasmus streperus (Linnaeus)

Griscom considered this western species of rare occurrence in our region and knew of only ten records, all from Long Island. It is quite possible that the more numerous records in recent years are due, at least in part, to a more complete coverage by many times as many observers working in localities once considered remote.

To-day the Gadwall is an uncommon but regular transient and winter visitant on Long Island, being confined chiefly to

a few favored fresh-water localities, such as Dean's Sanctuary on the Carmen River at South Haven. It is usually seen singly or in small groups, and a record of fifty or so birds is phenomenal. Away from Long Island it is a much rarer bird, is principally recorded as a transient, and is of purely casual occurrence in winter. One may well go for an entire year without seeing this bird locally.

The Gadwall has arrived at Jones Beach, Long Island, as early as August 25, 1923 (Boulton, Carter, Griscom and Urner), but this is exceptionally early as the next few dates are grouped during the second week in September. The status of the bird throughout the fall and winter is unpredictable. Whereas the highest local counts have all been on Long Island in winter, the species is virtually unknown elsewhere in our region at this season. Between early March and mid-April a light spring flight takes place. Birds have lingered at Newark, New Jersey, to April 24, 1927 (Urner), at Tuckahoe, Westchester County, to April 25, 1940 (Bull), and at Jones Beach, Long Island, as late as May 24, 1937 (Cruickshank).

European Widgeon

Mareca penelope (Linnaeus)

This handsome duck from the Old World, even though decidedly uncommon to rare in our region, now occurs every year as a transient and winter visitant. It is preeminently a fresh-water bird and, as might be expected, is invariably associated with Baldpates. It is of much more regular occurrence on Long Island than elsewhere in our region, and in a few favored localities, such as the Hempstead Reservoir, Gardiner's Island and the Dean Sanctuary at South Haven, it may be expected with an astonishing degree of certainty. Though generally occurring singly or in twos or threes, there have been extraordinary flights on Long Island when I have seen as many as fourteen in a day. Away from Long Island

the bird is known chiefly as a very rare transient visitant with most of the dates concentrated in March and October. The freezing over of inland waters undoubtedly is responsible for the scarcity of winter records there.

The European Widgeon has arrived at Mastic, Long Island, as early as September 12, 1915 (Griscom and J. T. Nichols), and there are several records for late in this month. The bird is usually at maximum abundance during late October and early November. Though purely casual in winter throughout the interior, a few always remain on Long Island during this season. In recent years I have regularly found at least one drake on the Hempstead Reservoir from late October to late March. There is a light return flight in March. After this month the occurrence of the European Widgeon is fortuitous, yet I find records sprinkled through early April and one for Jones Beach, Long Island, as late as April 29, 1934 (Vogt *et al.*).

Baldpate

Mareca americana (Gmelin)

The Baldpate or American Widgeon is a fairly common transient on the larger fresh-water ponds and marshes of our region, but in most localities it is seldom found in flocks of over one hundred. In a few favored spots, however, particularly where there is a good supply of widgeon grass or wild celery, it is occasionally locally abundant. On Gardiner's Island Griscom found this species positively abundant and in numbers rivaling the winter flocks of Currituck Sound. Reports indicate that this is probably still so, but elsewhere in the New York City region I have no records of such a concentration. Long Island is by far the best place locally to see this duck, for not only is it widely distributed and common during migrations but annually hundreds of birds winter. Away from Long Island the bird is ordinarily less common, yet it is of much more regular occurrence than it was twenty

years ago and in suitable habitat is recorded fairly commonly during migrations and occasionally in winter.

The Baldpate has arrived in the Bronx region as early as July 30, 1926 (Kuerzi), on Plum Island as early as August 9, 1898 (Helme), and there are several other records for this latter month. Such occurrences are, however, decidedly abnormal, as the species seldom arrives before September and is never here in numbers until the first light frost late in this month. By the end of November most of the birds have left for the south. Small groups regularly remain to spend the winter, the large majority on Long Island at such places as Jones Beach, Hempstead Reservoir and the Dean Sanctuary at South Haven. With the coming of March a return flight sets in, and within the next month the bulk of the birds passes through. At this season the Baldpate is much more common and more generally distributed inland than at any other time. By late April most of the birds have departed for their breeding grounds, but a few irregularly linger through May, and I find a record for Jones Beach, Long Island, June 17, 1933 (Vogt), and another for South Haven, Long Island, July 9, 1938 (McKeever and Sedwitz).

American Pintail

Dafila acuta tzitzihoa (Vieillot)

This striking stream-lined duck, though a fresh-water species usually associated with ponds, streams and marshes choked with aquatic vegetation, will not hesitate when necessary to settle on the brackish coastal bays, the Sound and at times even the ocean. Judging by reports it is much more common locally than it was twenty years ago, and it now occurs throughout the New York City region as a common transient visitant, particularly during the early spring flights when it is often locally abundant. It is uncommon to rare in winter and purely casual in summer.

PL. 6. Pintail (*Dafila acuta tzitzihoa*)

As soon as the ice breaks the northward migration of Pintails begins



From time to time small groups of Pintails reach our region in late August, but it is normally not until the first ten days in September that the initial flocks arrive. Numbers gradually swell, and the fall peak comes between mid-October and mid-November. By early December the species usually disappears from the interior, and the few wintering birds are confined to the ponds and sanctuaries near the coast, particularly on Long Island. As soon as the ice starts to break up and the marshes thaw out in late February the large flights of Pintails arrive. In March the species is locally at maximum abundance for the entire year, and occasionally in the larger marshes of New Jersey thousands are seen in a single day. April brings a rapid decrease, and after the end of the month only a few straggling abnormal individuals remain. There are records of non-breeding birds sparsely sprinkled throughout the summer.

European Teal

Nettion crecca (Linnaeus)

Less than a decade ago this bird was considered an accidental visitant from the Old World. J. G. Bell reported several specimens taken on Long Island in 1858 and earlier. Two birds were shot out of a flock of Green-winged Teal at Merrick, Long Island, about December 17, 1900 (Braislin).

Almost thirty-two years elapsed without a single record. Then in the spring of 1932 three records came from Morris County, New Jersey (Edwards and Urner), and the following winter the bird was found to be wintering on Long Island. Since then the European Teal has been a rare but locally regular bird on Long Island each winter, and the reports are now too numerous to list. The species has been seen at widely scattered points on Long Island, and there are records for practically every day between the end of November and mid-April. The earliest record is from the Hempstead Reservoir, October 13, 1940 (Mayer, Rose and Terry), and the latest

from Jones Beach, May 13, 1938 (J. Elliott). By far the best place to see this species is on the Hempstead Reservoir where a capable observer is fairly certain of seeing one or more specimens any day during the winter, and groups of up to six drakes have been frequently observed. It is usually associated with Green-winged Teal. I have seen drakes of both *crecca* and *carolinense* courting the same duck, and twice found birds that were apparently intermediates.

Away from Long Island the European Teal is still one of the rarest of finds, and many large sections are without a single record. I find records for Newark Bay, Troy Meadows, the Jersey City Reservoir near Boonton, Bronx County and Croton Point. This species when recorded inland is usually found among the spring flights of Green-winged Teal. The earliest record for the interior is from the Jersey City Reservoir near Boonton, February 27, 1932 (Edwards), the latest from Troy Meadows, New Jersey, May 5, 1932 (Urner).

Green-winged Teal

Nettion carolinense (Gmelin)

Until the middle of the nineteenth century the Green-winged Teal was a very common duck, and it occurred in large flocks. Its tameness, however, was its undoing, and by 1910 it was practically unknown in our region except on Long Island where it occurred in small numbers. With the cessation of spring shooting the bird showed an immediate increase and since then it has been on the upward trend. To-day it is a common transient visitant. It is much more common on Long Island and in the large marshes of New Jersey than it is elsewhere in our region. A few birds winter along the coast each year. Though the bird is extremely partial to the quaking grassy edges of fresh-water creeks, marshes and ponds it will occasionally settle even on salt or brackish water.

This species arrives later in the fall than the Blue-winged Teal. Though a few irregularly trickle into our region during the last half of August, it is ordinarily the first week in September that brings the initial flight. Numbers progressively swell until mid-November when a fall peak is reached. With the first severe freeze in December the species virtually disappears from the interior. Over one hundred birds winter annually on Long Island, a large percentage on the Hempstead Reservoir. With the coming of March there is a marked influx of migrants. During the period of maximum abundance, which normally comes soon after the middle of the month, I have seen over five hundred birds in a day by covering the Hempstead Reservoir, the Jones Beach area and Heckscher State Park. By April 15 most of the birds have left for their breeding grounds. A few regularly linger into May, and one or two barren birds occasionally remain throughout the summer.

Blue-winged Teal

Querquedula discors (Linnaeus)

The Blue-winged Teal is essentially a bird of muddy pools, sluggish streams, plant-choked ponds and fresh-water marshes, but in our region, possibly through necessity, it often lands on large lakes, reservoirs and even brackish creeks. Its history in our region is practically identical with that of the preceding species. To-day it is a common transient and a very rare local summer resident. It is the only one of our Anatinae that is positively accidental in winter. The bird has been found breeding in Troy Meadows, South Plainfield, Morristown, Orient, Speonk and East Moriches. Young have been observed in other localities, adults have frequently been seen in summer, and it is quite possible that the species nests much more regularly than the few definite breeding records might indicate.

This is the first of our ducks to arrive in the fall, small flocks regularly showing up as early as the initial week in August. Numbers steadily swell until late September or early October when maximum abundance for the entire year is reached. At this season I have occasionally seen remarkable flocks of over two hundred along the south shore of Long Island and in the larger fresh-water marshes of New Jersey. With the first killing frost in early November most of the birds rush southward, and very few linger to the end of the month. I find six records for December, two for January, three for February, plus a record of a bird that remained throughout the winter on the Hempstead Reservoir, Long Island, in 1933-34 and was seen by numerous observers. In very advanced seasons one or two Blue-winged Teal return during the first half of March, but normally it is the last of our ducks to arrive in the spring, and the first flights do not come until early April. The spring flight is much lighter than the fall one and in some sections it may be missed entirely. Migrants are regularly passing through up to the middle of May and casually later. The bird generally nests in a tussock in marshy grounds. There is but one brood, the few local egg dates ranging from April 30 to May 13.

Shoveller

Spatula clypeata (Linnaeus)

In 1923 Griscom wrote: "This species has always been rare on Long Island and it is not without significance that it has never been seen there by present day ornithologists." He listed but seven records away from Long Island, five for New York State and two for New Jersey. To-day the status of this species is entirely different. While still a fairly unusual bird in all but a few chosen Long Island localities, it occurs annually, and I doubt if there is an active field ornithologist in the region who has not seen at least a half dozen individuals.

It is strictly a fresh-water bird, being very partial to the shallow edges of ponds and the pools of the open marsh.

At present on Long Island the Shoveller is uncommon but regular during migrations and decidedly uncommon and local in winter. By far the best place to find this species is on the Dean Sanctuary at South Haven where I have counted as many as forty-three birds on two ponds. It occurs regularly, however, on all of the better fresh-water duck localities in Nassau and Suffolk Counties, but usually singly or in twos and threes. Away from Long Island the bird is much less common, even during migrations, and purely casual in winter. It is now recorded annually in all major localities, however, and there is no point in listing records in detail.

The Shoveller has arrived on the Newark marshes, New Jersey, as early as August 26, 1929 (Clausen), and on Long Island on several occasions early in September. The species regularly arrives during the third week in September, and most of the birds pass through in October. With the first severe freeze the species ordinarily disappears from the interior, and the few wintering birds are confined almost exclusively to Long Island. In mid-March a light return flight sets in, and migrants are regularly passing through up to the middle of April. By the end of this month most of the Shovelers have departed for their breeding grounds, but a few irregularly linger into May, and I find a record for Troy Meadows, New Jersey, as late as May 18, 1930 (Uerner).

Wood Duck

Aix sponsa (Linnaeus)

Until the middle of the nineteenth century this most beautiful of our ducks was a common summer resident throughout the region. Due to overshooting it rapidly fell off in numbers and by 1910 was considered a rarity. Soon after it was taken off the hunting list a decided increase was

noticed and to-day, while not by any means an abundant duck around the New York City region, it is encountered regularly. It is a lover of fresh-water ponds, forest-bordered streams and flooded woodlands and naturally is only of casual occurrence on salt or brackish waters and on the coastal strip.

The Wood Duck is now a fairly common transient in fresh-water localities throughout our region, even alighting annually on ponds, streams and reservoirs in New York City. An analysis of all breeding data reveals that over one hundred pairs nest within our boundaries. Naturally very few pairs nest within the heavily settled metropolitan area. Elsewhere, though widely distributed as a breeder, it is least common on Long Island and most common in the wilder sections of New Jersey and the northern sections of Rockland County. In the last decade as the beavers liberated in Bear Mountain Park have spread and created more flooded woodlands the bird has steadily increased there.

The Wood Duck regularly arrives from the south in a widespread wave during the second week in March, and migrants are passing through well into May. This spring flight is usually light and in many localities frequently overlooked. The bird nests in a hollow tree, a stump, a bird box and occasionally even on the ground. Though nests are most frequently found near the water, some are placed in dry woodlands and even in orchards. There is but one brood, local egg dates concentrated in late April and early May, with extremes April 4 and June 10. In late August, among the heavier flights of Blue-winged Teal, the southbound Wood Ducks arrive. Maximum abundance for the entire year comes on the heels of the first heavy frost in late September or early October, and at this season flocks of forty or more may be encountered. In 1932 over two hundred congregated on the ponds of the Wyandanch Club near Smithtown, Long Island. After the first killing frost in early November the Wood Duck virtually disappears from our region, but each year small

groups linger to the end of December, and occasionally a few remain throughout the winter. The majority of wintering records are confined to such places as city parks and duck sanctuaries where liberal feeding is done.

NYROCINAE: DIVING DUCKS

Redhead

Nyroca americana (Eyton)

Griscom's statement that "fortunate indeed is the observer who sees this bird anywhere near New York City" is even more applicable to-day than it was twenty years ago. Field ornithologists from the extreme eastern end of Long Island may take exception to this statement, for there, and only there, is it of regular occurrence each winter on a few ponds, such as at Water Mill, around Montauk and on Gardiner's Island. The only other localities where the species has been seen with any degree of regularity in recent years are Heckscher State Park, the bays along the northern shore of Queens County, and off Croton Point in Westchester County. Though a decided rarity elsewhere, years of intensive birding have produced records for all major localities, and there is nothing to be gained by listing them. While primarily a duck of large fresh-water lakes it is regularly seen in the larger salt-water bays and brackish inlets. My highest local count in over twenty years of birding is one hundred and twenty-four individuals in a day on eastern Long Island, but Dr. Helmuth has seen over two hundred in a day in this same section.

So scattered and so meager are the records that I hesitate to group them into migration periods. The species has arrived in Mecox Bay, Long Island, as early as September 18, 1933 (Helmuth), and on several occasions later in this month. The Redhead is, however, essentially a cold weather duck and is most common during the winter. Records inland are most prevalent from late November through December and again

in March. The species usually disappears by early April, but a few irregularly linger to the middle of the month, and one was seen at Orient, Long Island, on April 28, 1939 (Latham), and another at Water Mill, Long Island, as late as May 22, 1937 (Sabin).

Ring-necked Duck

Nyroca collaris (Donovan)

Griscom, writing twenty years ago, gave but three definite records for the Ring-necked Duck in the New York City region. The increase of this species has been one of the outstanding and most gratifying local changes of the last decade. With the bird slowly establishing itself as a summer resident eastward even to northern Maine it is becoming more and more regular throughout the east, and at present it is a much more common duck in our region than the Canvas-back. It is even more partial to fresh water than the Lesser Scaup and is rarely seen on salt or brackish water. Unlike other members of its genus it may frequently be found in small swampy ponds and shallow streams feeding with Coots and various dabbling ducks.

At present the Ring-necked Duck is a fairly common transient on most of our large fresh-water lakes and reservoirs. The best places to see this species are the extensive Kensico and Croton Reservoirs in Westchester County, the larger ponds around the Carmen River in Suffolk County, and the lakes and ponds of Morris and Passaic Counties. The bird is very uncommon in winter, but a few irregularly remain as long as there is open fresh water.

The Ring-necked Duck has arrived at South Haven, Long Island, as early as September 24, 1939 (Breslau and Sedwitz), and at Orient, Long Island, as early as October 1, 1938 (Latham). Such dates are abnormal, however, as the species does not regularly arrive until the first killing frost in late October or early November. Most of the birds pass through

during this latter month. After the first severe freeze the species becomes scarce, and the few wintering birds congregate near spillways and in sheltered spring-led coves where the fresh water remains open. With the coming of the heavy duck movement in mid-March the Ring-necks reappear and generally in larger numbers than in the autumn. At this season one will regularly see flocks of over one hundred and occasionally concentrations of up to three hundred. By mid-April the species is decidedly rare. There are three unusual records: Kensico, Westchester County, May 15, 1927 (Kuerzi); Culver's Lake, New Jersey, June 1, 1941 (Brown); Tuckahoe, Westchester County, first week of June, 1941 (Bull).

Canvas-back

Nyroca valisineria (Wilson)

To summarize the status of this magnificent duck in our region is a difficult task, for none of our waterfowl shows more irregularity in its movements, its numbers, and its points of concentration than the Canvas-back. It is usually a rare bird and occurs most regularly on eastern Long Island around Water Mill, on the bays of the East River in both Queens and Bronx Counties, and on the Hudson River off Croton Point. Phenomenal flocks of up to five hundred or more birds have periodically occurred in the forementioned localities, but the discovery of a flock of even one hundred anywhere in our region is considered a memorable occasion. Away from these favored spots the species is exceedingly rare and may be unrecorded for years at a time.

Aberrant individuals have arrived in the New York City region during August and September, once in Shinnecock Bay, Long Island, as early as August 2, 1929 (Wilcox). The Canvas-back, however, is casual before the first killing frost in early November and is never here in numbers until December. Whether these birds will remain during a par-



ticular winter or whether other flights will come unexpectedly in January or February is unpredictable. There is usually a light northward flight from early March to early April, at which season the species may be more reasonably expected in the interior than at any other time of the year. A few Canvas-backs linger to the end of April, and I find a record for Parsippany Lake, New Jersey, April 29, 1934 (C. Cobb and Cruickshank), and another for Speonk, Long Island, May 1, 1929 (Wilcox).

Greater Scaup Duck

Nyroca marila (Linnaeus)

The Broad-bill, as this species is popularly called, is one of our most abundant and best known ducks. It is certainly the most common local bay duck throughout the winter and is the one seen by the hundreds and at times thousands on our salt-water bays and estuaries. Careful and conservative estimates in recent years have placed the scaup wintering on that relatively short stretch of the East River between Pelham Bay and Flushing Bay as between thirty and fifty thousand. Eastward on the Sound numbers diminish. In the bays along the south shore of Long Island, Staten Island and along our section of the Jersey coast the species is generally common throughout the winter, but one seldom finds such concentrations as mentioned for the East River. The bird also occurs commonly on all of the large lakes, reservoirs and rivers of the interior, but due to the freezing over of these waters in winter it occurs there chiefly as a transient.

Small groups of Greater Scaup irregularly arrive in late August, but the species should not be expected until the first light frost in late September, and it is never here in large flocks until the first killing frost in early November. From then on the numbers swell, and many bays become blackened by the enormous rafts. There are local movements through-

out the winter as severe cold forces flocks to move from areas that have frozen over. Birds arriving from the south in February swell our population to maximum abundance for the entire year. In March as soon as the ice leaves the ponds, lakes and reservoirs flocks appear throughout the interior, and at the same time the population along the coast begins to thin out. By mid-April most of our scaup have departed for their breeding grounds, but flocks regularly linger into May, and a few occasionally remain as non-breeding birds throughout the summer.

Lesser Scaup Duck

Nyroca affinis (Eyton)

In our region this small Broad-bill is essentially a fresh-water duck and is seldom found in numbers on salt or brackish waters. The fact that this species is infrequent on our tidal waters seems inexplicable to anyone who has seen it wintering by the thousands along the Florida coast. Yet preferences are often merely seasonal, as further substantiated by the fact that whereas the Greater Scaup apparently prefers the tide waters around New York City the species breeds chiefly on the fresh-water lakes of central Canada.

The Lesser Scaup occurs in our region as a fairly common transient, as a very uncommon winter visitant, and as an extremely rare summer vagrant. A few small aberrant groups occasionally arrive in early September, but it is generally not until the first heavy frost in early October that the initial widespread movement takes place. A fall peak is reached in November. With the first severe freeze in December the species virtually disappears. There are always scattered reports throughout the winter, but I can say unequivocally that many of these are based on misidentifications. To separate the Greater and Lesser Scaup except under ideal conditions is a risky undertaking even for the most experienced of

observers. In fact it is generally impossible. Fortunately most of my statements concerning the status of the two scaup in our region are thoroughly substantiated by examinations of hunter's bags, collections and dead specimens found in the field. In early March as soon as the ice leaves our inland waters, flocks of Lesser Scaup return, and migrants are passing through up to mid-April. Small groups often remain until May, and a few non-breeding birds irregularly linger throughout the summer.

Rufous-crested Duck

Netta rufina (Pallas)

An immature male of this European species found in Fulton Market, New York City, in February, 1872, was said to have been shot on Long Island (Ridgway, *Bulletin of the U. S. National Museum*, 1881, No. 21, p. 85). Many game birds in this market came from Chesapeake Bay and the West, and unfortunately there is no way of proving that this specimen was taken on Long Island. This species, therefore, must be relegated to our hypothetical list.

American Golden-eye

Glaucionetta clangula americana (Bonaparte)

All during the winter the Golden-eye or Whistler is the second most common diving duck on the majority of bays around New York City. It generally avoids the much-used harbors but occurs commonly right up to the outskirts of the metropolis. It is astonishingly uncommon on the open ocean and is usually found there only after exceptionally cold weather has sealed inland waters and many tidal bays. The species is not by any means partial to salt or brackish water, and as long as there is open water inland it occurs commonly on our larger rivers, lakes and reservoirs. By far the best place to study this duck is on Long Island Sound

and its adjoining bays where over one hundred may be seen during any full day of birding in winter. In fact, concentrations of several thousand birds are occasionally encountered. Roy Latham has estimated seeing over eight thousand around Orient in a single day.

The Golden-eye has arrived in Mecox Bay, Long Island, as early as September 1, 1940 (Helmuth and Sedwitz), and in Englewood, New Jersey, as early as September 14, 1924 (Baker). Such dates are, however, unusual, as it is usually late October before the species arrives. With each successive cold wave the numbers swell, and by Christmas our bays ordinarily have large flocks. The population throughout the winter is largely dependent on the severity of the weather. The Golden-eye is associated in my mind with bitter cold days. The more severe the winter the larger the flocks along the coast, due not only to birds frozen out of our inland waters but also to birds rushing down from the frozen bays and estuaries farther north. By mid-March the birds commence to disappear from the coast, and at the same time they reappear on the lakes and reservoirs throughout the interior as fast as these bodies of water open up. After mid-April the species is a rarity, yet there are now many records for May, several for early June, and I find a record of one on Greenwood Lake, New Jersey, June 19, 1926 (Hickey and Urner), a record of a male collected of a pair near Englewood, New Jersey, July 28, 1911 (J. Weber), and a record of an apparently injured bird that spent the summer of 1937 in Jamaica Bay, Long Island (Imhof).

Barrow's Golden-eye

Glaucionetta islandica (Gmelin)

I have seen this northern species on the Maine coast in winter and have had no difficulty in identifying *typical drakes*. If it occurred regularly around New York City it

certainly would not be overlooked by our veteran observers, and the scarcity of local records clearly indicates that this species rightly belongs with our list of very accidental winter visitants. I have passed day after day in our region carefully scrutinizing our Golden-eyes and have never succeeded in picking out this species. I have, however, seen plumages of the American Golden-eye that might well be erroneously taken to be Barrow's Golden-eyes, and the many sight reports by inexperienced observers of the rarer bird are not worth much consideration.

There is but one collected specimen, a bird taken on Long Island many years ago and now in the collection of the Long Island Historical Society. Mr. Latham, one of our most competent observers, states that the Barrow's Golden-eye is occasional in winter around the Orient Peninsula, and he has dates ranging from January 5, 1909, to March 3, 1918. There are also sight records from Montauk, February 1, 1937 (Pangburn), and January 23, 1939 (Helmuth). Sight records by such veteran observers are undoubtedly correct, and further investigation may well reveal that the species occurs annually at the extreme eastern end of Long Island. Away from this section I find only two records worth listing, both from Raritan Bay: January 5, 1936 (Urner); February 5, 1939 (Brown, Edwards and Wolfarth).

Buffle-head

Charitonetta albeola (Linnaeus)

This smallest of our diving ducks is just as much at home on saline bays and estuaries along the coast as it is on the larger lakes, rivers and reservoirs throughout the interior. Over the larger part of the New York City region it is an uncommon but regular transient and winter visitant. Naturally it disappears inland whenever severe cold waves seal the fresh water. The species is rarely found on the open

ocean. By far the best place to see the bird is at the eastern end of Long Island where it is often fairly common in winter. It must be emphasized, however, that this species never occurs in large flocks even in our best areas, and one is fortunate to see over twenty individuals on any one day. During severe winters I have seen over one hundred in a day on the Orient peninsula.

The Buffle-head has arrived on Long Island as early as September 16 (E. H. Eaton, "Birds of New York State"), on Kensico Reservoir, Westchester County, as early as September 23, 1933 (Cruickshank and Rossiter), and at several points in our region during October, but the species is not to be expected until the first killing frost in early November. The status of the bird for any one winter is rather variable and depends largely on the weather. A severe freeze naturally forces the birds inland to rush to the coast. In late February or early March as soon as the ice starts to break up there is a northward movement and the species reappears on our inland bodies of water. By mid-April the majority of Buffle-heads have gone north to breed. Occasionally a bird lingers into May, and I find records for Wantagh, Long Island, early June, 1935 (Mangels); Shinnecock Bay, Long Island, June 9, 1939 (Wilcox), and Huntington Harbor, Long Island, June 7 and July 6, 1941 (McKeever).

Old-Squaw

Clangula hyemalis (Linnaeus)

This gorgeous duck is a common to abundant winter visitant on the ocean, on Long Island Sound and on most of our large bays. It only irregularly enters the East River between Bronx and Queens Counties, Upper New York Bay, Newark Bay and the Hudson River. Away from the tide waters it is purely casual, yet it has been found in New Jersey as far inland as Overpeck Creek, Morristown, Boonton, Parsippany,

Pine Brook, Hanover and Ledgewood. Contrary to popular belief the best place to see the duck is not along the ocean front but on the eastern two-thirds of Long Island Sound. It is perfectly at home on the wild, wintry ocean and is regularly seen there, but excluding the section around Montauk Point it is seldom truly abundant in our region except along the north shore of Suffolk County.

A few Old-Squaws occasionally arrive from the north in early September, but it is normally mid-October before the first widespread movement takes place. Numbers progressively swell, and by Christmas our normal winter population has been established. During the winter I have frequently seen over one thousand birds in a single day by working the north shore of Long Island from Eaton's Neck to Wildwood State Park. As winter progresses the birds become increasingly noisy, and in our better Old-Squaw localities their nasal bay-ing is one of the characteristic sounds of March and early April. At this season good-sized flocks often appear on the Sound off Westchester County. By the end of April most of the birds have departed for their far northern breeding grounds, but small groups regularly linger to the end of May, and there are now many records of non-breeding birds for every week throughout the summer.

Eastern Harlequin Duck

Histrionicus histrionicus histrionicus (Linnaeus)

This species, rivaling in beauty the Wood Duck, is a very rare bird south of Massachusetts, and fortunate indeed is anyone who sees it anywhere in our region. Locally it is confined almost exclusively to the ocean. It is a lover of a bold rocky coast, and it may not be mere coincidence that most of our records for western Long Island are from the extensive breakwaters at Rockaway Point and Atlantic Beach.

Though one of our rarest winter visitants, years of intensive birding have produced over three dozen Long Island records,

and there is no point in listing them in detail. An analysis of all data reveals that the species has been recorded most often at Orient and Montauk Points. It has also been recorded at Southold, Gull Island, Swinburn Island, Mastic, Bellport, Fire Island Inlet, Jones Beach, Freeport, Long Beach, Atlantic Beach, Rockaway Point and Brighton Beach. The earliest records are: Mastic, first week in November, 1915 (J. T. Nichols); Bellport, November 10, 1899 (Babson); Orient Point, November 11, 1895 (Worthington). The majority of records are concentrated in December, January and February. In February, 1940, two birds appeared off Atlantic Beach and were seen on numerous occasions up to April 16 (Arbib, Cruickshank *et al.*). This is by far our latest date.

Away from Long Island I find but one record for our region. This record is based on a skin shown to Louis Kohler on September 7, 1913, by the keeper of the light on Ellis Island who said that the bird had been killed hitting the light. There are about six records for the New Jersey coast to the south of us.

Labrador Duck

Camptorhynchus labradorius (Gmelin)

According to old reports this species was apparently not uncommon in winter on Long Island even up to the early part of the nineteenth century. The cause of its extinction is unknown. The next to the last specimen known to have been taken was collected on Long Island in the fall of 1875.

American Eider

Somateria mollissima dresseri Sharpe

Even though this bird breeds as far south as Penobscot Bay on the Maine coast and winters by the thousands on the shoals off Martha's Vineyard and Nantucket, it is a decided rarity around New York City, and except at the eastern end

of Long Island it may go unrecorded for years at a time. By far the most promising place to look for this large ocean duck in our region is at Montauk Point where intensive work in recent years has revealed that a few winter annually. To-day the Montauk records are far too numerous to list. It appears that one to six birds are to be found there every winter. There are thirty-eight scattered mid-winter records for the remainder of Long Island, the large majority from along the south shore, one as far west as Coney Island. Since Eaton gave but five records, and Griscom knew of only one additional reliable observation, it is obvious that the species has shown a remarkable increase in the last two decades. The bird has been recorded at Montauk Point as early as September 2, 1940 (Sedwitz), and at Center Moriches as early as November 8, 1886 (Foster). The majority of records are concentrated in January and February. The latest record is from Montauk Point, March 25, 1894 (Mulford).

Away from Long Island I can find no record to add to that much publicized one from Ossining, December 14, 1894 (A. K. Fisher).

King Eider

Somateria spectabilis (Linnaeus)

This species nests much farther north than the American Eider and in winter it is a rarity even as far south as the New England coast, yet, contrary to what one might be led to believe, it is far more common than the American Eider in the New York City region. Singularly, most of the birds seen locally are immature males. On Long Island it is a rare but regular winter visitant. Though the majority of records come from the extreme eastern end of the Island, there is a liberal sprinkling along the Sound as far west as Bayville and along the south shore as far west as Coney Island. By far the best place in the entire region to see the species is at Montauk Point where small flocks occur annually and where as many as two

dozen birds have been observed in a single day. Though there are several records for the New Jersey coast to the south of us, I cannot find one reliable record for our portion of that state. The species is casual on the Sound off the eastern shores of Bronx and Westchester Counties. Inland I find but two records, both from exactly the same spot on the Hudson River near Riverdale: December 23, 1928, to late January, 1929 (Cruickshank, Muller *et al.*), and December 22, 1929 (Cruickshank *et al.*).

A King Eider was seen on Oyster Pond near Montauk, Long Island, on September 30 and October 1, 1933 (Helmuth), and another was collected at Mastic, Long Island, in early October, 1912 (Dana). Such records are unique, however, as the species is essentially a winter visitant and seldom arrives until the middle of November. The large majority of local records are concentrated between early December and the end of February. By the middle of March all of our King Eiders have normally departed for their far northern breeding grounds. There are several records for April. One was seen at Eaton's Neck, Long Island, on May 9 and 15, 1936 (Berliner, Cruickshank, Whitman *et al.*), and another at Long Beach, Long Island, on June 1 and 8, 1924 (Meyers and Janvrin). In addition, there is a remarkable record of one that remained on Oyster Pond near Montauk, Long Island, throughout June, July, August and September, 1938 (Helmuth, Mayer *et al.*).

American Scoter

Oidemia americana Swainson

This is the least abundant scoter locally, and it is never found in tremendous concentrations like the other two. It is, nevertheless, very common during migrations, fairly common in winter and rare as a non-breeding summer resident. It occurs commonly on the ocean, much less commonly on the eastern two-thirds of Long Island Sound, uncommonly at the

western end of the Sound and on the larger ocean bays, irregularly up the Hudson River, and casually inland. It frequently outnumbers the Surf Scoter on the ocean south and west of Jones Beach. Years ago Mearns, Fisher and Stearns regarded all three scoters as abundant migrants on the Hudson River. This certainly is not true to-day, although the White-winged still occurs there regularly, and the other two at least annually. Most of our Hudson River records now come from the Tappan Zee. Inland this bird is decidedly accidental, and I know of but two reliable records; Newark Bay, New Jersey, November 9, 1924 (Urner); Overpeck Creek, New Jersey, October 15, 1922 (Hix).

Early in September the first flocks of American Scoters arrive from the north. Numbers progressively increase, and in late November a fall peak is reached. By January the bulk of the birds has passed south, yet the species remains as a fairly common bird on the ocean throughout the winter. In late February a return movement sets in, and all during March large flocks pass through. At this season the species generally reaches its local peak of abundance, and thousands may occasionally be seen on the ocean in a day. By the end of April most of the American Scoters have gone north to breed, but small flocks regularly linger through May, and there are now numerous records of non-breeding birds throughout the summer.

White-winged Scoter

Melanitta deglandi (Bonaparte)

This bird, popularly known as the White-winged Coot, is the most abundant scoter in our region and at the period of maximum abundance in winter probably outnumbers the combined local population of our other two species. It is essentially a bird of the ocean and the wider stretches of Long Island Sound and is known as a common to abundant winter visitant in these places. It occurs fairly commonly at the

western end of the Sound and in most of our larger ocean bays. It occurs uncommonly but regularly on the wider stretches of the East River and on the Hudson River, irregularly on Newark Bay, rarely on the large lakes and reservoirs east of the Hudson River and casually in the interior of New Jersey. I find two records for inland New Jersey; Overpeck Creek, May 14, 1920, (Griscom); Branchville, May 20, 1931 (Fry).

Small flocks of White-winged Scoters regularly arrive in our region as early as the middle of September, but it is not until the first killing frost in early November that the great southward movement takes place. The peak of local abundance, while occurring sometime between mid-November and mid-March, seems to vary considerably and is undoubtedly correlated with local feeding conditions. As many as one hundred thousand birds have been seen in some of the large concentrations off Montauk Point. Hundreds can usually be seen during any day in winter on the ocean and on all but the extreme western end of the Sound. In late March the winter concentrations start to thin out, and at the same time large flights are seen passing up the coast. Flocks regularly linger through April, and I have seen over five thousand in a day on the ocean even during the last week of this month. By mid-May practically all of our White-winged Scoters have departed for their northern breeding grounds, leaving only a few non-breeding birds to pass the summer.

Surf Scoter

Melanitta perspicillata (Linnaeus)

The Skunk-head, the most beautiful of our scoters, is second in point of abundance in the New York City region, at times even outnumbering the White-winged at Montauk and on sections of Long Island Sound. Though a very common winter visitant on the ocean and on all but the extreme

western end of Long Island Sound, it is usually less common than the American Scoter on the ocean south and west of Jones Beach. The bird irregularly wanders into our larger tidal bays, but away from expanses of salt water it is unquestionably the rarest of the scoters. Though regarded as an abundant transient on the Hudson River years ago, it is now a very rare bird there and is usually recorded only on the Tappan Zee. I find but one record for Newark Bay, December 6, 1925 (Urner), and none for farther inland.

The Surf Scoter arrives from the north during the middle of September, and numbers gradually increase until the first killing frost early in November when there is a pronounced flight down the coast. The bird is a common to abundant winter visitant on the ocean and on all but the western end of Long Island Sound, and seldom is a full day passed along these waters in winter when several hundred Surf Scoters are not seen. Periodically concentrations of many thousands are observed. In March northbound flocks commence to fly up the coast. These are soon joined or followed by the birds that have wintered locally. Although all of our large concentrations have ordinarily disappeared by mid-April, flocks continue passing by well into May, and a few non-breeding birds regularly remain off our coast throughout the summer.

ERISMATURINAE: RUDDY AND MASKED DUCKS

Ruddy Duck

Erismatura jamaicensis rubida (Wilson)

The Ruddy Duck is essentially a fresh-water bird and whereas it sometimes occurs on the ocean and Long Island Sound I am afraid that most of our reports from saline waters are of the female American Scoter. The resemblance at any distance is often misleading, and I have witnessed even experienced observers differing as to the identification of a particular bird.

The status of the Ruddy Duck varies so markedly from one section of our region to another that it is well-nigh impossible to present any concise picture. Since a few birds irregularly remain throughout the summer it is impossible to say just which record constitutes the first arrival from the north. An analysis of all data reveals, however, that a few migrants reach our region during September and that the initial heavy frost in early October brings the first light flight. Over the larger part of our region the bird is very rare during the autumn. On the other hand, this is the best time to look for the bird on eastern Long Island. The largest concentrations in our region for the entire year are generally found on the ponds around Water Mill and Southampton in late November and December. From one to four hundred birds have frequently been seen there in a single day. The status of the bird in winter depends to some extent on the weather, but as a rule it is a decided rarity, and away from Long Island is usually unknown. With the big duck movement between mid-March and early April a light flight of Ruddies arrives from the south. Singularly, this flight virtually skips Long Island. Observers away from Long Island, however, now have their best chance to see this species. An inland observer is always lucky to see this bird, and even a flock of ten is considered remarkable. After mid-April the Ruddy Duck is purely casual, yet there are now many records of aberrant individuals that lingered throughout the summer.

MERGINAE: MERGANSERS

Hooded Merganser

Lophodytes cucullatus (Linnaeus)

This smallest and most beautiful of our mergansers is a lover of quiet fresh-water lakes and streams. It is decidedly the most uncommon of the three and, according to old records, has always been so. Griscom, writing as late as 1923, said:

"It is now a very rare bird and ten years have gone by with scarcely a record near the city. The last three years, however, indicate a decided increase." It is with great satisfaction to the present day ornithologists that this species has continued that climb, and to-day, while by no means common, it can certainly be expected every year as a transient on most bodies of fresh water. The best places near New York City to see this bird are Playland Lake, Kensico Reservoir and Croton Reservoir in Westchester County where during the height of migration in November as many as forty-eight birds have often been found in a day. With the slow but steady increase more and more records are turning up each year from all sections.

In late August we generally get one or two reports of small groups of Hooded Mergansers, and as September passes the reports increase. With the first heavy frost in October there is a pronounced flight. During November the species is at its peak of abundance for the entire year, and in the most favorable habitat it is often possible to see one to four dozen birds in a day. Being extremely partial to fresh water most of the birds are forced to go south with the first heavy freeze, but each winter a few remain on the little open water of the interior and more regularly in the warmer Long Island areas. From time to time, especially when all inland water is frozen over, the Hooded Merganser will be found on salt or brackish water, but it alights there usually only through necessity. With the coming of March and the breaking up of the ice a return flight sets in. This spring movement is always light and generally terminates by the middle of April. From time to time a few birds linger into May, and on rare occasions an aberrant individual or pair will remain throughout the summer. The species has never been found breeding locally. It has bred, however, as near as Connecticut and central Pennsylvania, nesting in hollow trees in much the same type of habitat preferred by Wood Ducks, and it is quite possible that some day some one will find a nest within our region.

PL. 8. Hooded Merganser (*Lophodytes cucullatus*)
During the last two decades the Hooded Merganser
has decidedly increased throughout the New York
region



American Merganser

Mergus merganser americanus Cassin

This handsome duck is indelibly associated in my mind with the wildest days of winter when the great cakes of ice groan and crunch against one another on their way down the Hudson. It is preeminently a fresh-water species and occurs as a common winter visitant on all the larger lakes, reservoirs and rivers of the interior. It is one of the few ducks that is less common on Long Island than elsewhere, except during extremely severe weather when all of the inland waters freeze over, and these shelldrakes are forced to the more open water along the coast. During such spells I have seen over four hundred on the Hempstead Reservoir and have even met with good-sized flocks on the brackish inlets where normally this species is purely casual. It is indeed rare at any time on the ocean, the Sound and the large salt-water bays. The Hudson River north of Yonkers seems to be sufficiently fresh, and the bird is always common there in winter.

An American Merganser was seen on the Jones Beach Pond, Long Island, where the bird is uncommon at any season, on the remarkably early date of September 10, 1933 (Vogt). Another was seen on Grassy Sprain Reservoir, Westchester County, as early as September 13, 1939 (Bull and Young). The third week in October, however, seems to be the normal date of arrival for the earliest individuals, and the species is seldom common before December. In all our large fresh-water localities it is often possible to see from one to four hundred birds in a single day. Its period of maximum abundance in any one locality will depend entirely on the weather and the availability of open fresh water. On March 15, 1936, at Croton Point on the Hudson I saw the largest concentration of American Mergansers that I have ever witnessed. A huge flow of ice was working its way towards the sea and on the extensive stretches of open water some fifteen

hundred American Mergansers, seventy per cent of which were males, were enthusiastically and noisily putting on their striking courtship performance. As spring approaches, the bulk of American Mergansers follows the opening of inland waters. After mid-April the species is decidedly rare, yet with the slight increase of this duck in recent years more birds have been lingering into the middle of May. I find a record for the Passaic River, New Jersey, June 8, 1941 (Kebless), and another for Delaware Water Gap, New Jersey, July 4, 1937 (Ajello and Sanford).

Red-breasted Merganser

Mergus serrator Linnaeus

This salt-water shelldrake is an abundant transient, a common winter visitant and a very rare or casual summer resident in the New York City region. It is essentially a bird of the ocean, the Sound and the larger bays, and though it may be expected as far as the tide penetrates, it abruptly becomes uncommon away from the wider stretches of saline water. It still occurs annually on Newark Bay, the wider portions of the East River and on the Hudson River, but in such localities it is never found in large numbers. Though a rarity on the lakes, rivers and reservoirs throughout the interior, there are now too many records to list. In recent years the bird has occurred an astonishing number of times inland in New Jersey, especially during April. As many as twenty-seven birds were seen at Pompton Lakes, April 21, 1940 (Edwards, Eynon and Wolfarth).

The first flight of Red-breasted Mergansers ordinarily reaches the New York City region during the middle of September. By mid-October the species is common. By November it is abundant, and sometime during this latter month a fall peak is reached. In December numbers decline, but the species remains as a common and conspicuous winter visitant

on all of our larger bodies of salt water. On Long Island one can generally see over four hundred birds during any day in winter if a particular search is made. With the coming of March courtship displays become very frequent. At the same time the spring flight sets in, and for the next month and a half large flocks are passing through. Early April probably brings the spring peak, and at this season the bird is most likely to occur inland. After the middle of May most of the birds have departed, regularly leaving a few barren individuals to pass the summer. The bird is casual as a breeder on Long Island. Breeding evidence supported either by a nest or very small young has been submitted from Fisher's Island, Oyster Pond, Shinnecock Bay, Mastic and Gardiner's Island.

CATHARTIDAE: VULTURES

Turkey Vulture

Cathartes aura septentrionalis Wied

I can think of no better way to sum up the range and history of the Turkey Vulture in our region than to quote from Griscom: "No bird has a more remarkable distribution in our area than the Turkey Vulture, and I confess my total inability to explain it. Moreover it is now known to be quite different from what has been previously reported. In New Jersey it was supposed to range north regularly to Sandy Hook, Plainfield and Princeton, and casually farther north. As a matter of fact it is a common summer resident in western and northern New Jersey right up to the New York State line, especially along the Kittatinny Ridge. Here it undoubtedly breeds, as I have flushed single birds in late May and early June from the ground in thick, rocky woods, and it has been found nesting near Boonton and Denville. The bird is common in most of Warren, Sussex, and Passaic Counties, and steadily decreases eastward and southeastward. East of a

north and south line running approximately through Plainfield and Boonton it is an exceedingly rare bird until we get to Staten Island, where it reaches the coast. This line of demarcation is quite sharply defined in places. At Boonton Mr. Carter informs me that it occurs regularly six miles west of the town, but he has never seen it farther east."

The picture in New Jersey remains virtually the same to-day, but now the bird has extended its range even beyond the Kittatinny Ridge, up into the lower Catskills and across northern Rockland County and through Putnam and Dutchess Counties to western Connecticut and extreme northern Westchester County. Each year it becomes more common throughout this extension of its range, and it now undoubtedly breeds regularly in the highlands of Rockland, Putnam and Westchester Counties. A nest was found as far east in our region as Lewisboro, Westchester County, on June 8, 1925 (Howes), and there are now breeding records even for Connecticut. South of this belt and east of the belt outlined in New Jersey by Griscom, the Turkey Vulture is still an uncommon bird, but it occurs much more regularly now and the records from all sections are too numerous to list.

The Turkey Vulture is a permanent resident over a large part of southern New Jersey, but in our region winter records are few and are confined chiefly to Monmouth County. The bird has arrived in Boonton, New Jersey, as early as February 23, 1941 (Carter), and in Riverdale, Bronx County, March 9, 1927 (Kieran), but it is generally the third week in March before these perfect monoplanes come gliding up from the south. Most of the birds arrive in April, and it is during this month that the species occurs most frequently in areas where it is normally uncommon. Vagrants apparently wander throughout the summer, and the bird might well be recorded in any section on any day from mid-March to mid-November. The Turkey Vulture nests on the ground in a thick clump of vegetation, in a cave, or in a hollow stump. The few definite

egg dates I can find for our region range from May 15 to June 12. With the coming of September the birds again go on a wandering spree, and we once more have a number of records for Long Island and the greater metropolitan area. By the end of October most of our Turkey Vultures have departed for the south. Stragglers irregularly linger until Christmas, but after this date only the few wintering birds in our section of New Jersey remain.

Black Vulture

Coragyps atratus atratus (Meyer)

The Black Vulture is strictly accidental this far north, and sight identifications should be accepted only after meticulous scrutiny. Only four specimens have been taken in the New York City region: Sandy Hook, spring of 1877 (Lawrence); Coney Island, about 1881 (LeBerier); Plum Island, May 19 or 20, 1896 (Crandall and Braislin); Shelter Island, December 22, 1925 (Latham).

Mr. Roy Latham has had the astounding luck of seeing this species at Orient, Long Island, on six occasions: May 4, 1907; June 20, 1916; June 3 to 7, 1920; June 15, 1924; June 8, 1931; May 22 to 24, 1940. I find four other sight reports from Long Island: Bayside, October 12, 1934 (Bohn); Prospect Park, May 22, 1938 (Brennan and Kraslow); East Hampton, July 31, 1938 (Helmuth); Water Mill, February 11, 1940 (Jaques). I also find a report of one seen at North Salem, Westchester County, May 7, 1936 (Ogburn).

ELANINAE: KITES

Swallow-tailed Kite

Elanoides forficatus forficatus (Linnaeus)

This magnificent bird is an accidental visitor from the south. Four specimens have been taken in our region:

Raynor South, Long Island, 1837 (Giraud); south shore of Long Island, 1845 (LeBerier); Chatham, New Jersey, about 1873 (Herrick); Piermont, Rockland County, August 22, 1900 (Nicholas).

The species is so unmistakable that the following sight identifications made by experienced observers under ideal conditions seem unquestionable: Orient, Long Island, May 28, 1927 (Latham); Chappaqua, Westchester County, October 2, 1927 (Pangburn); University Heights, Bronx County, April 30, 1928 (Hickey and Cruickshank); Fords, New Jersey, May 19, 1940 (Cant, Fables and Rapp).

There are several other sight reports, but in these cases either the observers were inexperienced or the conditions under which the bird was seen were very unfavorable and the likelihood of error is too large to make the observations of any importance.

ACCIPITRINAE: ACCIPITERS OR SHORT-WINGED HAWKS

Eastern Goshawk

Astur atricapillus atricapillus (Wilson)

This most handsome and powerful of our short-winged hawks is a rare and irregular winter visitant to the New York City region. It is, however, subject to well-marked flights which seem to come in regular nine to eleven year intervals and are undoubtedly correlated with the cycles of snow-shoe rabbits, lemmings and ptarmigan upon which most of the Goshawks normally exist. Most of the birds reaching our area are immature. Well-marked invasions have reached us in 1863, 1889, 1895-96, 1898-99, 1906-07, 1926-27 and 1935-36. The flight of 1926-27 was the heaviest for this century, and during that winter birds were recorded in widely scattered localities, even in the five boroughs of New York City. As a consequence, there are now numerous records for all major

localities and it would be superfluous to list such occurrences. Over fifty Goshawks were killed at Stag Lake, New Jersey, during that flight.

Excluding flight years the Goshawk is purely casual over the larger part of our region. Members of the Uner Ornithological Club inform me, however, that a few are seen every fall from mid-October to mid-November from favorable observation points on the Kittatinny Ridge of northwestern New Jersey. One or two birds probably reach the extreme eastern end of Long Island every winter.

The Goshawk has been seen on the Kittatinny Ridge, New Jersey, as early as September 11, 1939 (Rusling), and in Van Cortlandt Park, Bronx County, as early as October 3, 1936 (Norse). Whereas the few regular transients in northwestern New Jersey occur chiefly in late October and early November, during flight years the date of arrival and length of time the birds will stay are unpredictable. The bird is essentially a rare, erratic winter visitant with most of the records grouped between early November and mid-March. After the end of March the species is casual, yet I find several records for early April, one for Gardiner's Island, April 19, 1920 (Latham), one for Stag Lake, New Jersey, April 19, 1919 (von Lengerke), and another for the Bronx region, April 28, 1928 (Bronx County Bird Club).

Whereas we generally think of the Goshawk as a winter visitant from the far north, it must be pointed out that a few pairs nest in Pennsylvania in terrain quite similar to that in northwestern New Jersey, and therefore it would not surprise me at all if some day a pair were found nesting within our boundaries.

Sharp-shinned Hawk

Accipiter velox velox (Wilson)

This dashing little hawk is unquestionably the most common of our accipiters. Over the larger part of the New York

City region it is common during migrations and rare in winter. As a summer resident it is apparently uncommon and confined chiefly to the wildest sections. It still breeds regularly though sparsely in Suffolk County, northern Westchester County, Rockland County and in all the least-settled portions of New Jersey. A few occasionally breed in rather populated sections, and nests have even been found within the New York City limits in recent years. During the breeding season the bird is usually secretive and quiet until the nest is discovered. It can be very easily overlooked, and it unquestionably breeds more commonly than the very few nests discovered each year indicate. During migrations by far the best place to see the species is along the mountain ridges and higher hills of northern and western New Jersey where it is frequently abundant during well-marked flights in late September and October. Heavy movements never occur on Long Island, but with a strong northwest wind in fall there is sometimes a decided flight of Sharp-shins to Gardiner's Island, Montauk Point and Orient Point and thence down the highest ridges and bluffs of the north shore. During April I have occasionally seen over a dozen birds in an hour coming across the ocean from Sandy Hook to Coney Island.

In late August a few Sharp-shinned Hawks are regularly seen flying high overhead towards the south, but it is not until the first light frost in late September that a heavy movement begins. For the next month the species is at its peak of abundance for the entire year and on some of the best flyways in New Jersey several hundred birds may be recorded in a day. After the third week in October the birds quickly fall off in numbers, and by early December only a few wintering individuals remain. With the coming of late March the northward migration commences. It is never as spectacular as the autumn flight, the birds being more widely distributed and seldom occurring in large flocks. April regularly brings the peak of the spring flight, and very few migrants pass through

after this month. By May summer residents are generally well established on their breeding territories. The nest is most often found in woodlands, particularly in pines and hemlocks, and is generally placed about twenty feet from the ground. As in all hawks there is but one brood, local egg dates ranging from May 5 to June 11.

Cooper's Hawk

Accipiter cooperi (Bonaparte)

The Cooper's Hawk is rather partial to country where dense woods and thickets are interspersed among fields, meadows and farm lands. Over the larger part of the New York City region it is fairly common during migrations and rare but regular in winter. Whereas it is not by any means as numerous as the Sharp-shinned Hawk during migrations, it is the more common of the two in winter and by far the more common of the two in summer. Though uncommon as a breeder, it is fairly well distributed in the rural sections of our region. A few pairs still nest in the least populated parts of the metropolitan area, and a pair or two even nest within the boundaries of New York City. In recent years Mr. Cleaves has found a pair nesting on Staten Island. The species is extremely secretive during the breeding season, and it is undoubtedly a much more common summer resident than the few nests discovered each year might suggest.

The migration of the Cooper's Hawk both as to dates and flyways is quite parallel to that of the Sharp-shinned. The first southbound birds regularly arrive in late August or early September, but it is ordinarily not until the first heavy frost in early October that any pronounced widespread movement sets in. Even at the peak of migration it is unusual to see over fifty of these large accipiters in a day, even on our best flyways in northwestern New Jersey. By the middle of November migration has normally ended, and only scattered winter-

ing individuals remain. During the second week in March a return flight sets in, and it continues through April with the bulk of the birds passing through during the latter month. A few stragglers regularly linger until the middle of May after most of our summer residents have eggs. The nest is generally placed high in some giant tree. There is but one brood, local egg dates concentrated in early May, with extremes April 16 and June 12. As is true of most summer residents, a few unmated birds roam about throughout the summer and are apt to show up in any area at any time.

BUTEONINAE: BUTEOS OR BUZZARD HAWKS, AND EAGLES

Eastern Red-tailed Hawk

Buteo borealis borealis (Gmelin)

None of our hawks has shown a sharper decline in the last two decades than the magnificent Red-tail and, sad to say, it is no longer a commonplace winter sight to see several of these large buteos circling against the sky. Over the larger part of our region it is known chiefly as a fairly common transient and a locally not uncommon winter visitant. During migrations it is most common on the major hawk flyways of north-western New Jersey and is least common on Long Island. The species is astonishingly rare at any time on the south shore of Nassau County west of Patchogue. Mr. Vogt had only one record during his residence at Jones Beach, Mr. Bicknell had only one record at Long Beach in years of observation, and in the last six years living in Freeport I have had unusual opportunities for birding and yet have seen this species only three times in this locality. As a summer resident the Red-tailed Hawk has a rather puzzling distribution. A few pairs regularly nest in the northern hill country of New Jersey, and occasionally a pair is found breeding elsewhere

in our portion of that state. Very few pairs nest in the highlands of Rockland County and extreme northern Westchester County. On Long Island the species is unknown as a breeder outside of the wildest sections of Suffolk County; here it is uncommon and is virtually confined to the great pine and oak barrens between Melville and Riverhead.

In early September a few Red-tailed Hawks are regularly reported gliding down the flyways of northwestern New Jersey. It is not until the first light frost towards the end of the month, however, that any pronounced flight sets in and not until the first heavy frost in early October that any widespread movement takes place. The major flights are virtually confined to the mountain ridges of New Jersey and Rockland County, although good-sized movements are periodically witnessed in northern Westchester County. During October and early November, whenever favorable weather occurs, hundreds of Red-tails are recorded along the flyways. A few birds are still passing through in early December but by Christmas only the wintering birds remain. These wintering individuals are partial to the edges of large marshlands and flooded open woodlands. In late February, even before the principal northward migration has taken place, pairs of Red-tails may be seen making preparations to breed. The nest is generally placed high in a tree, preferably in a conifer. There is but one brood, local egg dates concentrated in April, with extremes March 17 and May 6. Through March, April, and sometimes even up to early May, migrants keep passing through, but this spring movement is ordinarily very light and unimpressive.

Northern Red-shouldered Hawk

Buteo lineatus lineatus (Gmelin)

The Red-shouldered Hawk is a fairly common permanent resident over the larger part of the lowlands, showing a decided increase during migrations and a marked decrease in

winter. With the exception of the Sparrow Hawk it is probably the most generally distributed breeder of all our Falconiformes. During the breeding season, whereas the Red-tailed Hawk favors the wildest and highest hill country of the interior and the great pine and oak barrens of Long Island, the Red-shouldered Hawk virtually avoids these two areas, preferring the richer lowlands where damp woods border on fields and marshes. It is not as retiring as its larger relative, does not hesitate to live near dwellings, and until very recent years even nested in Van Cortlandt and Inwood Parks well within the New York City limits. The unfounded prejudice against all raptorial birds unfortunately still exists, and these useful rodent destroyers are shot out of more and more sections year after year. It must be remembered that due to this bird's soaring and screaming performances it is very conspicuous wherever it occurs, and one might readily get the erroneous impression that it is a very common hawk. During migrations the species is widely distributed, and it is most numerous at this season along the major hawk flyways of northwestern New Jersey where it is relatively rare at all other seasons. The bird is surprisingly rare over large stretches of southern Long Island, and is purely casual at any time along the outer strip.

A few southbound Red-shouldered Hawks commence passing through our area in early September, but it is not until the first light frost during the last half of this month that any appreciable movement is noticed. The bulk of the birds passes through in October. Whereas records often indicate five thousand Broad-wings and three thousand Red-tails passing down a flyway during a single autumn, the Red-shouldered total seldom goes much above two hundred. Excluding flight periods it is unusual to see over six Red-shouldered Hawks in any one full day of birding even in our best localities. By the middle of November migration has practically ended, and the bird becomes a fairly common local winter

visitant. In March, the date depending to some degree on the weather, the northward migration begins. This movement extends all through April and is rather light and unimpressive. The local breeders regularly commence nest building in early March. The nest is usually placed in a large tree at least thirty feet from the ground. There is but one brood, local egg dates concentrated in April, with extremes March 28 and June 12.

Broad-winged Hawk

Buteo platypterus platypterus (Vieillot)

This smallest and most unsuspicious of our buteos is a fairly common summer resident in the hilly forested sections of New Jersey and Rockland County, a less common summer resident in similar terrain in the northern two-thirds of Westchester County, and a much less common summer resident along the ridges of the north shore of Long Island east to Manorville, Sag Harbor and Gardiner's Island. Elsewhere it is purely casual as a breeding bird. A nest found at Idlewild, Long Island (Mayer), is indeed unique. During migrations the species is fairly common in most sections, and on the day of a major flight in fall it is locally abundant. The bird is generally uncommon along the south shore of Long Island and always rare on the outer strip. It is strictly accidental anywhere in our region in winter, and most of the reports for this season are not worth a moment's consideration.

None of our hawks is more definite in its periods of migration than the Broad-wing. Aberrant individuals have appeared in early April, but the species arrives from the south with great regularity between the fifteenth and twentieth of April, and migrants keep passing through to the end of the third week in May and casually later. The nest is placed either in a coniferous or deciduous tree over twenty feet from the ground. There is but one brood, local egg dates concentrated in the last half of May, with extremes May 4 and June

17. During the last half of August and early September a few southbound Broad-wings are reported irregularly passing through, but the spectacular flight almost invariably comes during the last two weeks in September, and one fortunate to be afield in the right locality on the chosen day will see several thousand gyrating birds stippling the sky. Apparently the main Broad-wing flight in our region is not a ridge flight but a cross ridge flight, the birds circling on thermals to gain altitude and then progressing in a long glide until the next pronounced thermal is reached. When atmospheric conditions during the last half of September offer the first perfect day for such manoeuvres the Broad-winged Hawks come through *en masse*. An analysis of all available data suggests that one of the major movements comes down the Sound to the neighborhood of New Haven, swings across Westchester County, crosses the Hudson River and continues on its westward path across northern New Jersey. The exact path of this flight depends on the weather conditions for the particular day. It most regularly crosses the Hudson River at Croton Point or comes down the Saw Mill River Valley and crosses in the region of Spuyten Duyvil. Only once was I lucky enough to strike the big day (September 19, 1925) and on this occasion I counted over one thousand birds between the Jerome Reservoir and Yonkers. Naturally, other hawks get drawn into the great movements, yet the September Broad-wing flights are remarkably homogeneous. I have no record of a heavy flight reaching Long Island. A few migrants do pass over, but flocks of over a dozen are extremely rare. Occasionally one of the major flights will follow a ridge, but generally the ridge will be left after a short distance for a more westerly route. Of course, numbers of Broad-winged Hawks pass down the ridges from early September to mid-October, but these represent only a small percentage of the total number passing through our region each fall. By October 25 all of our healthy, normal birds have left for their wintering grounds in the

tropics. A specimen was collected at Stamford, Connecticut, a few miles from our border on January 12, 1929 (Shipley, identification corroborated by J. T. Nichols). I also find seven sight reports by experienced observers which are undoubtedly correct: Van Cortlandt Park, Bronx County, February 12, 1921 (F. E. Watson), and December 7, 1933, to February 7, 1934 (Cruickshank, Norse *et al.*); Idlewild, Long Island, March 10, 1935 (Mayer); Rye Lake, Westchester County, December 22, 1935 (Cook and Brand); Orient Point, Long Island, December 22, 1939 (Latham); Woodmere, Long Island, December 24, 1939 (Berliner and Harrower); Jones Beach, Long Island, February 18, 1940 (J. Elliott). The Van Cortlandt Park bird of 1933-34 stayed through no choice of its own. When discovered it was in such a crippled condition that it was barely able to fly, and as winter progressed it survived chiefly by remaining close to a large garbage dump.

American Rough-legged Hawk

Buteo lagopus sancti-johannis (Gmelin)

The Rough-legged Hawk, living almost exclusively on mice, is one of our most useful birds, and every effort should be made to disseminate this knowledge in order to stop the ridiculous slaughter that is annually depleting its numbers. It is extremely partial to the extensive meadows, marshes, moors, and fields along the coast, and it is the only buteo that is of regular occurrence on the outer strip of Long Island. It is a fairly common transient and winter visitant as far as the tide penetrates. A few winter regularly as far inland as the extensive Newark and Hackensack meadows in New Jersey, but farther inland the bird is decidedly uncommon during migrations and rare in winter. Most of our inland birds are seen on large marshlands or river bottoms, and astonishingly few are recorded each year on the major hawk flyways of northwestern New Jersey.

The Rough-legged Hawk has arrived at Freeport, Long Island, as early as October 6, 1936 (Cruickshank), at Idlewild, Long Island, as early as October 7, 1936 (Mayer), and at widely separated points in our region during the second week in this month, but it is not until the first killing frost in late October or early November that the initial widespread movement usually occurs. The peak of abundance for the entire year usually comes during the last half of November, but it must be remembered that the Rough-legged Hawk is never a common bird and memorable indeed is the day one sees over a dozen individuals. The species is fairly common, though extremely local, in winter. With the coming of March a very light return flight sets in, and by April most of the birds have departed for their northern breeding grounds. Occasionally there are light flights up to the middle of April, and a few stragglers have even lingered into May. The two latest records are: Riverhead, Long Island, May 12, 1941 (Latham), and Hohokus, New Jersey, May 13, 1934 (Helmuth).

American Golden Eagle

Aquila chrysaetos canadensis (Linnaeus)

The Golden Eagle, though a rare bird in our region, is unquestionably of more regular occurrence than formerly believed. Griscom called it casual and listed but three nineteenth century records for Long Island and two more recent records for New Jersey. In the last two decades we have had a number of local sight identifications, most of them by competent observers and undoubtedly correct.

There are forty-seven records before me, and I can see no point in listing them in detail. An analysis of all data shows that the species has been seen in most major localities. More than half of our records come from the Kittatinny Ridge in northwestern New Jersey where several birds are recorded each fall. At Hawk Mountain, Pennsylvania, not far from

our boundaries, Maurice Broun reported an average of fifty-two Golden Eagles each autumn from 1934 to 1938 (*The Auk*, 1939, Vol. 56, p. 437). In the New York City region the bird has been seen in every month except July, but summer records are very few and the large majority of occurrences are concentrated in October and November.

Bald Eagle

Haliaeetus leucocephalus (Linnaeus)

This majestic bird bred on Gardiner's Island until 1930 (Latham), and there are unsubstantiated rumors of a pair still breeding in eastern Suffolk County. A few adults are seen each summer in northern Westchester County, Rockland County and northwestern New Jersey, and it is possible that some day a nest will be found in one or all of these localities. The Bald Eagle is a possibility at any time in any locality, but over the larger part of our region it is known chiefly as an uncommon though regular transient and a rare winter visitor. It is most widely and generally distributed during the peaks of local migration in late April and early September. On the other hand, the only real concentrations occur in winter, but these are confined entirely to the Hudson River north of Dyckman Street. On days when there are large ice flows one may expect to see one to fourteen birds drifting down on the ice. Croton Point seems to be a favorite concentration place, for I have often seen over six individuals on this small peninsula during a single winter afternoon. These birds come down with the freezing of the water farther north and disappear as soon as the ice thaws out. Whereas all Bald Eagles taken locally have proved to belong to the southern race *leucocephalus*, it is very likely that many of the winter birds are of the northern subspecies *alascanus*.

In 1923 Griscom wrote: "The bird nests very early; consequently its presence as a transient chiefly in late spring and

early fall is hard to explain." We now know, however, that young birds banded in Florida and other southern states have been shot in the northeast in late spring soon after leaving their distant homes, and thus the explanation of these late April flights is found. This is but another illustration of the usefulness of banding operations in supplying much needed information about bird migration and distribution.

CIRCINAE: HARRIERS

Marsh Hawk

Circus hudsonius (Linnaeus)

The status of the Marsh Hawk varies so markedly from section to section that it is difficult to summarize the picture briefly. It is partial to the vast coastal marshes, the largest fresh-water lowlands of the interior, and to a much lesser degree to extensive dry, open fields. Its occurrence elsewhere is only casual except during migrations when it is seen passing over all types of habitat. It is a fairly common permanent resident on the large marshes along the ocean, showing a marked increase during migrations and a slight decrease in summer. In the large tidal marshes extending inland in New Jersey the bird is a less common permanent resident, and in many parts of this area it is rare to unknown in winter. Elsewhere throughout our region, even in the marshes bordering Long Island Sound, it is practically unknown in winter and is astonishingly uncommon and local as a breeding bird. Very few pairs still nest in Westchester County, Rockland County, inland New Jersey and on Long Island away from the actual coastal strip.

In early August it becomes evident that a few Marsh Hawks, mostly immatures, are passing southward. As the month progresses the numbers gradually swell, but it is not until the first light frost in September that any pronounced movement sets in. October brings the peak of abundance for the entire

year and at this time the bird is widely distributed. It must be emphasized that the Marsh Hawk never occurs in large flocks, and unusual is the day one sees over forty individuals even along the main migration channels on the coastal strip and on the hawk flyways of the interior. This is largely due to the fact that even though there are major flight lines the species moves with a broad front and over a protracted period. By December migration is virtually concluded, and the wintering birds are confined almost exclusively to the largest marshes along the south shore of Long Island, around Newark Bay and on the New Jersey coast. Six individuals may be expected on any trip to the Jones Beach strip at this season. With the first heavy thaw in early March a return flight sets in. The bulk of birds passes through during April, and by mid-May only the local summer population remains. In April the spectacular aerial evolutions associated with courtship are much in evidence, yet these acts do not necessarily indicate local breeding pairs as even birds passing through indulge in these performances. The Marsh Hawk nests on the ground in marshes or low open country. As with all hawks, there is but one brood, local egg dates concentrated in May, with extremes April 25 and June 16.

PANDIONINAE: OSPREYS

Osprey

Pandion haliaetus carolinensis (Gmelin)

This handsome Fish Hawk was formerly a common summer resident throughout our region wherever large bodies of water were to be found. Sad to say, this is no longer the case. At present in our section of New York State it nests only at the eastern end of Long Island where it is a common to locally abundant summer resident. Dr. Chapman states that two hundred nests have been found on Gardiner's Island,



and from all reports the population there now is even more impressive. Over fifty pairs breed on the Orient peninsula. Each year a few birds attempt to nest in western Suffolk County and occasionally in eastern Nassau County, but for sundry reasons they do not succeed. Though there are recent breeding records for Quogue and Wading River, the species must be considered casual as a breeder anywhere on Long Island west of Flanders. The species still nests commonly along the New Jersey coast as far north as Sandy Hook, yet I find only three nesting localities for the interior of our portion of this state for this century: Macopin (1915); Charlotteburg (1937); Franklin Lake (1935-1940). At present the Osprey is a fairly common transient throughout our region, at times abundant along the coast but generally becoming progressively uncommon as one works toward the interior. The main flight lines are along the coast, with minor movements along the Hudson, along the Sound, and occasionally along the hawk flyways of the interior.

An Osprey was reported as seen at Smithtown, Long Island, February 14, 1926 (Turrell), and at Speonk, Long Island, March 1, 1929 (Wilcox). Such dates are unique, however, as the species is purely casual even in mid-March, and the normal date of arrival is late in this month. The bulk of the birds passes through during April and the first week in May, but stragglers are irregularly recorded up to early June. Breeding birds are busily repairing old nests by the second week in April. The species nests on the ground, in a tree, on an old house, on a telephone pole or on a platform especially erected to attract it. There is but one brood, local egg dates concentrated in May, with extremes April 18 and June 12. I find reports of southbound Ospreys as early as the first week in July, but I suspect these to be vagrant, non-breeding individuals or wanderers from the south. Though southbound Ospreys are definitely on the move by early August, it is not until September that the bulk of the birds passes through.

During this month I have seen fifteen birds in a day in Westchester County, eight in a day on the Kittatinny Ridge in New Jersey and fifty-four in a day on the western half of Long Island. It should be emphasized that these figures do not give an accurate picture of the relative abundance in each section, since such flights are much more frequent on Long Island than elsewhere. After the middle of October the Osprey is a rare bird, but a few irregularly linger through November, and I find reports for Orient, Long Island, December 7, 1939 (Latham), and Morristown, New Jersey, December 25, 1918 (Caskey).

FALCONIDAE: FALCONS

Gyr Falcon

Falco rusticolus Gmelin

The status of the Gyr Falcons is still unsettled, and indications are that the so-called subspecies are nothing more than color phases of the same bird. The Gyr Falcon is an accidental winter visitant from the Arctic and fortunate indeed is anyone who sees a specimen anywhere in our region. Data concerning the following collected specimens have been repeated so often that it seems useless to give details. They are all in a dark phase: Long Island, winter of 1856; Pond Quogue, Long Island, 1877; Flushing, Long Island, fall of 1875; Long Island, 1899; Westchester County, winter of 1879; Oceanside, Long Island, about 1929.

I find the following sight identifications from Long Island, most of which are undoubtedly correct. Birds in dark phase: Jones Beach, October 13-20, 1934 (Vogt, Lane, Sedwitz); Orient, February 15, 1934 (Latham); Jamaica Bay, November 13, 1938 (Brennan, Imhof, Nathan *et al.*); Jones Inlet, January 8, 1939 (Mr. and Mrs. Cruickshank); Montauk Point, January, 1939 (Helmuth); Jamaica Bay, February 5, 1939 (Brooklyn Bird Club); Montauk, October 8, 1939 (Breslau and Sedwitz). Birds in white phase: Miller Place (Helme);

Jones Inlet, January 8, 1939 (Mr. and Mrs. Pough); Montauk Point, January, 1939 (Helmuth).

I find but one recent record away from Long Island: a dark-phased bird seen at Bear Mountain, Rockland County, April 19, 1936 (Deed).

Duck Hawk

Falco peregrinus anatum Bonaparte

This is the American facsimile of the courageous peregrine of falconry. No bird is more able to capture the admiration and respect of man. Its dauntless spirit, its marvelous powers of flight, its impressive, open manner of hunting and its regal appearance all make it the favorite bird of many an ornithologist.

The Duck Hawk evidently was never a very common species, and I can find no positive evidence to support the often heard statement that it is rapidly decreasing. The bird is a permanent resident in a few chosen localities. I know of six aeries within our region but because of the fanatical egg collectors, falconers and hunters who are ever ready to molest or destroy the species I think it advisable not to present detailed information about nesting sites. Away from these chosen places the species is very rare except during migrations when a few are reported from all sections. Singularly, New York City is as good a place as any to look for this species. In winter at least four birds remain to feast on the large supply of Starlings and pigeons offered by the metropolis. In recent years individuals have most frequently been seen on such structures as the immense gas tank at Hunt's Point, George Washington Bridge, Riverside Church and the tallest hotels around Central Park. It would not surprise me in the least if within a few decades the Duck Hawk were found nesting on the ledge of some tall building in Manhattan, since pairs have been found breeding in similar sites in other cities.

Around the middle of August migrant Duck Hawks come down the coast following closely on the heels of the great shore-bird flights and feasting on these delicate morsels. This movement continues throughout October and is confined chiefly to the coastal strip. At this season it is not unusual to see three to six Duck Hawks in a day along the south shore of Long Island, but counts of over a dozen are few and far between. Lesser flights occur along the major hawk flyways of the interior, yet seldom does an entire season produce more than two dozen birds on any one of these inland lanes. After the first week in November the southward movement is virtually over, and the bird becomes extremely rare except, as previously stated, near nesting sites and around New York City. The few resident birds make preparations to breed even before spring migration is under way. In our region the eggs are invariably placed on a small ledge of a sheer, inaccessible cliff. There is but one brood, local egg dates concentrated in April, with extremes March 28 and June 12. These late clutches certainly represent sets laid by birds whose first sets were robbed or destroyed. The spring migration is unimpressive and often unnoticed, but records indicate that it extends from mid-March to the end of April and casually through the third week in May.

Pigeon Hawk

Falco columbarius columbarius Linnaeus

As Griscom has pointed out "next to the Broad-winged Hawk this dashing little falcon is more often misidentified than any other species and for some reason Sparrow Hawks are constantly 'transmogrified' into the rarer bird." Over the larger part of the New York City region the Pigeon Hawk is an uncommon transient visitant but purely casual in winter or summer. By far the best and only sure place to see this species is near the ocean front, particularly in September when it is sometimes abundant.

Occasionally a few Pigeon Hawks arrive from the north during the second week in August, but it is not until late in this month that the fall movement normally sets in. September brings the peak of abundance for the entire year, and at this season it is usually the most common hawk along the coastal strip. During this month I have often seen over thirty in a day in the Jones Beach area, and during heavy flights I have counted almost one hundred. Dr. Helmuth writes of "twenty-seven killed and thrown into the road at Mecox, September 13, 1933." With the coming of the first heavy frost in early October numbers rapidly fall off and by the third week in this month the species is decidedly unusual. *Contrary to what many seem to believe the Pigeon Hawk is accidental between October 25 and April 10.* There are scores of winter reports for this little falcon, but in the majority of cases suspicion is unavoidable that the birds are dark immature Sparrow Hawks. There are, however, about one dozen reliable winter records, most of them from the south shore of Long Island. It is difficult to say whether the few early April dates represent arrivals from the south or birds that wintered locally. The first spring flight normally comes around April 24, and the large majority of birds rush through before the third week in May. This northward movement, though abrupt, is astonishingly light, and unusual indeed is the day in spring one sees as many as six individuals. After mid-May the Pigeon Hawk is strictly fortuitous, yet stragglers occasionally linger into early June, and there are apparently reliable records of non-breeding individuals that remained throughout the summer.

Eastern Sparrow Hawk

Falco sparverius sparverius Linnaeus

This best known of all our raptores is a common permanent resident over the larger part of the New York City region, showing a marked decrease in the interior in winter and a

decided increase everywhere both spring and fall. It is a bird of the open country, being especially partial to farm lands, extensive fields and meadows where mice abound. It is apparently becoming more accustomed to man. In recent years it has been more common within the New York City limits, can be met with every day on Manhattan Island, and even nests scatteringly in the crevices of buildings around Central Park and occasionally in the more crowded sections of the metropolis. The wilder sections, where climax woods coat the hills or where heavy stands of oak and pine cover the barrens, have no attraction for this beautiful little falcon, and it is purely casual in such country except during migrations when a few may be expected flying over any kind of habitat. It is unknown as a breeder and generally rare in winter on the coastal strip, yet this is its principal migration route in the fall.

In mid-August a few southbound Sparrow Hawks appear. As the month progresses the number increases, and by late September or early October maximum abundance for the entire year is reached. The main flight line is down the coast with the other falcons, but lesser movements occur on the major hawk flyways of the interior. During late September I have frequently seen over thirty Sparrow Hawks in a day along the south shore of Long Island and during remarkable flights as many as a hundred. After the middle of October numbers rapidly decrease, and by the end of November only the normal winter population remains. In the highlands of the interior the species may be absent at this season from large areas, but in the lowlands near the coast one may expect to see from three to ten individuals on any vigorous day of birding. With the coming of March a light return flight sets in, and by the end of April migration is concluded. Around the middle of March resident pairs begin their courting ceremonies. The nest is located in such places as a hollow branch, a flicker hole, a bird house, or the crevice of a building. There

is but one brood, local egg dates concentrated in late April and early May, with extremes April 9 and June 3.

TETRAONIDAE: GROUSE

Eastern Ruffed Grouse

Bonasa umbellus umbellus (Linnaeus)

The Ruffed Grouse or "Partridge" is probably the least migratory of all our native birds and is therefore one of the true permanent residents. From September through November, however, there comes a so-called "crazy season" when individuals dash against buildings and into towns and occasionally show up in places where they have been unrecorded for years. Whether this is due to a dying migratory urge, to irritation by internal parasites or to some other factor is still open to investigation. This species is virtually a bird of the climax woodlands and may be expected only in the wilder sections of our region. In New Jersey, Rockland County and northern Westchester County the birds prefer the rocky, wooded hills during the summer months, but in winter they drop into the shelter of valleys where they can most often be found around swampy thickets or in dense patches of conifers and mountain laurel. In fact, in severe winters, the leaves of the laurel constitute a good portion of their diet. Drumming may be heard during any month of the year and during any time of the day or night, but it is rare in winter and is most frequent during early mornings in April and May. The nest is placed on the ground, generally at the base of a tree or under the shelter of a rock. There is but one brood, complete clutches of eggs being prevalent in May, with extremes April 14 and July 20.

The Ruffed Grouse is subject to marked cycles. At present it seems to be more common locally than it was twenty years ago. On Long Island it is nowhere a common bird, but individuals are annually reported from the Montauk peninsula,

the Riverhead region west to the Carmen River and occasionally as far west as Northport, Deer Park and Belmont Lake State Park. It is common throughout the wilder sections of Rockland County. In Westchester County it has shown a marked increase in the northern half, is now frequently heard drumming in spring, and I have flushed six birds on a morning's stroll around Pound Ridge. The species decreases southward to Kensico and below this point is accidental, vagrants being infrequently found in the fall as far south as the Elmsford Ridge. In New Jersey it is now extirpated in all the suburban sections near New York City. A few birds still survive as far east as Summit, Montclair and Ridgewood. At Boonton it is fairly regular, and from this point increases northward and westward until it might be called common in the remote sections of the Kittatinny Mountains and the Waywayanda Plateau. Here sixteen birds have been flushed in a day, and the drumming in early spring is one of the characteristic sounds of the wooded slopes.

Heath Hen

Tympanuchus cupido cupido (Linnaeus)

The Heath Hen is now extinct. Formerly a common permanent resident on the scrub oak and scrub pine barrens of Long Island and New Jersey, it could not withstand the combination of uncontrolled hunting and excessive fires, and it rapidly disappeared. The last specimen collected in our region was taken on Long Island in 1840.

PERDICIDAE: PARTRIDGES AND QUAILS

Bob-white

Colinus virginianus virginianus (Linnaeus)

The Bob-white, frequently miscalled "Quail," is a lover of open meadows, fields and brushy swamp lands. Though

one of our true permanent residents, there are occasionally indications of a fall movement as some periodically show up in unusual places at this season. The bird has gradually been disappearing in the New York City region. To-day its distribution is so uneven that one's opinion of whether the bird is rare or common depends on the area that individual habitually covers. Recent Christmas censuses by the Bronx County Bird Club in Bronx County and lower Westchester County list from one to four dozen individuals. In northern Westchester and Rockland County the bird is much less common. It is now rather rare in our portion of New Jersey as indicated by the fact that Christmas censuses from this section in recent years have often failed to list a single specimen. There are, however, a few coveys sprinkled over the lowlands, and one living in a chosen locality might well think I present too unfavorable a picture of the bird's status in northern New Jersey. Long Island is one of the best remaining places in our region to see this species, but even here it is generally uncommon and steadily decreasing. It is widely but thinly distributed from the eastern edge of Queens County to Riverhead. In 1939 eleven Christmas censuses were taken on Long Island. Six failed to find a single bird. The other five listed seventy-nine. Very few are still to be found on Fire Island, and the exact status of the bird in the large pine and oak barrens still requires investigation. An astonishing number of pairs still survive within the limits of New York City, and therefore the bird's decrease over the larger part of our region certainly cannot be attributed directly to the advance of civilization, as has often been suggested. Over-shooting and a subsequent weakening of vigorous blood through the introduction of stock from as far south as Florida, Texas and Mexico are undoubtedly the major factors. In fact it is questionable whether any unmixed blood remains in our region, and the Bob-white of to-day appears to be even less able than its predecessors to stand the rigors of a severe winter. The

bird continues on the decline, but I hope the day will never come when local students can no longer hear its stirring whistle in spring.

In late summer Bob-whites gather into coveys and frequent the edges of grain fields. Once winter comes and snow covers the ground most of these groups take to dense spring-fed swamps where they remain until the weather moderates. Late in April the coveys break up, and the males settle on their respective territories and reveal their presence by loud, clear calls. The nest is placed on the ground. There are probably often two broods, local egg dates concentrated in late May and early June, with extremes May 7 and August 25. There must be later clutches, as I saw a bird with newly-hatched young still incapable of flight near Brookville, Long Island, on September 27, 1938, and Yeaton has seen downy young on Long Island as late as October 12.

PHASIANIDAE: PHEASANTS

Pheasant

Phasianus colchicus Linnaeus

The pheasants of the New York City region are descendants of several introductions in which the Asiatic races with a white ring on the neck (*torquatus* and possibly *mongolius*) predominate. The European (*colchicus*) and Japanese (*versicolor*) races without a ring, as well as several other Asiatic races, have contributed to the local mixed stock.

As recently as 1923 Griscom listed localities for the occurrence of the pheasant and stated that "it remains to be seen, however, whether these wandering birds will be able to survive without special protection." The introduction has surpassed all expectations. The bird has bred in the wilds with remarkable success and in spite of heavy hunting has increased until to-day it is a common permanent resident over the larger part of the New York City region. Though very

partial to open country where fields and meadows are sprinkled with brushy thickets, it is an adaptable bird and may be expected in any type of habitat except deep climax woodlands, extensive salt marshes and open beaches. It has even established itself in parks around the outskirts of New York City and in the dense tangles of grasses, bayberry and poison ivy along the outer strip of Long Island. On Long Island and in all of the suburban areas it is a much more common bird than the Ruffed Grouse or the Bob-white. One may expect to see from two to twelve birds during any vigorous day of birding, and recent one-day Christmas censuses by the Bronx County Bird Club in Bronx County and lower Westchester County have averaged around one hundred individuals. The nest is generally placed on the ground in a protective clump of grass, weeds or vines. There is apparently but one brood, local egg dates concentrated in May, with extremes April 16 and July 6.

MELEAGRIDIDAE: TURKEYS

Eastern Turkey

Meleagris gallopavo silvestris Vieillot

The wild Turkey was apparently abundant throughout the New York City region in colonial times. DeVries mentions shooting a thirty-pound specimen near New Amsterdam around 1640. Long before the days of our earliest ornithologists, however, the bird had been extirpated from our area.

GRUIDAE: CRANES

Whooping Crane

Grus americana (Linnaeus)

This beautiful crane has long been extirpated from our region, and it is now one of the rarest of North American birds. From all reports it once occurred regularly along the

Atlantic seaboard during migrations. "DeVries in his Journal, describing the country of New Netherlands, mentions White Cranes as occurring (1639-42) with the swans, geese and ducks which swarmed on the coast of New York Bay" (Eaton). Though the species was not recorded in our region by either Giraud or DeKay, there is one record for New Jersey as late as 1857.

RALLIDAE: RAILS, GALLINULES AND COOTS

King Rail

Rallus elegans elegans Audubon

The exact status in this region of the largest and most striking of our rails still awaits clarification. It is excessively secretive, prefers the depths of fresh-water marshes where dense grasses, reeds and cat-tails conceal its presence, and it is probably slightly more numerous than the few records would indicate. Many of its notes could be passed for Gallinule squawks and its others are nothing more than bass renditions of the Virginia Rail calls. Trips before sunrise in May to large fresh-water marshes in Westchester County, New Jersey and on Long Island lead me to suspect that the species is widely, though thinly, distributed and has merely been overlooked.

For the present it must be considered a very rare summer resident in our region. I have heard birds calling during the breeding season in the fresh-water marshes near the south shore of Long Island, and there are scattered reports of its presence at this season in other Long Island sections, yet I can find but one positive breeding record: a nest and eggs, Bayside, June 11, 1924 (Wright, Carr, Hamilton). The only other nest and eggs for our section of New York State was discovered in the Van Cortlandt swamp, Bronx County, on May 26, 1927 (Cruickshank). This pair, though frequently disturbed by numerous students anxious to see a King Rail,

got off with a brood of ten young. In New Jersey the species undoubtedly breeds in the wild expanse of Troy Meadows where it is heard each year. Griscom listed a nest with nine eggs found by LaRue K. Holmes in the Great Swamp in 1900, and I can find no other definite nesting record for our section of the state.

There is evidently a late fall flight to New England either from the south or west. Forbush lists the species as an occasional fall visitor to Maine, and approximately half of the local records before me are grouped between mid-November and mid-January. Most of these records are from fresh-water marshes, several are of birds caught in muskrat traps. Due to the fact that inland marshes are frozen over, many winter records come from the extensive salt marshes where one would expect to find only the Clapper Rail. There are now records for every month in the year. They are so confusing that I find it impossible to list migration periods, but the records indicate that King Rails generally arrive from the south during the fourth week in April.

Northern Clapper Rail

Rallus longirostris crepitans Gmelin

This large rail is confined exclusively to the extensive salt and brackish marshes along the coast. It is a noisy bird and a trip to its breeding grounds in summer, especially at daybreak or dusk, will make one acquainted with the diagnostic clattering. In recent years drainage operations have been systematically destroying the required habitat, and consequently the bird has been getting progressively less common. At present the bulk of the population in the New York City region is concentrated on the south shore of Long Island between Jones Beach and Jamaica Bay. The species is surprisingly scarce along the south shore east of Oak Island. On the north shore pairs have been found breeding at Orient, Cutchogue,

Mattituck and Crab Meadow Beach, and scattered records of the bird's occurrence all around the periphery of Long Island are before me. The species still nests regularly in the few remaining marshes on Staten Island. It is astonishingly scarce along the Sound in Bronx and Westchester Counties. A bird with its brood was found at Baxter Inlet, Bronx County, on August 20, 1934 (Malley), and another with young was found at Rye, Westchester County, during the summer of 1941 (Bull). It was formerly a summer resident on the marshes around Spuyten Duyvil, and I found one or two pairs breeding there until 1924. The bird nests commonly in all the large coastal marshes of New Jersey. It formerly bred regularly around Newark Bay but it is now probably extirpated as a summer resident there. Away from the coast the Clapper Rail is strictly accidental. I find one record for Ossining, Westchester County (A. K. Fisher), and another for Overpeck Creek, New Jersey (G. C. Fisher).

The Clapper Rails ordinarily arrive from the south in a marked wave during the third week in April, and by the middle of May most of the summer residents are on their breeding grounds. At this season in some of the best marshes between Jones Beach and Jamaica Bay I have flushed six birds and heard well over two dozen in a day, but even in the best localities an observer usually considers himself fortunate to see a single Clapper Rail or hear a half dozen calling on any one day. The nest is generally placed in a clump of grass and beautifully arched over. There is probably but one brood, local egg dates concentrated in late May and early June, with extremes May 3 and August 7. Clapper Rails are leaving our region all through late August and September, and after the first heavy frost in early October the species is uncommon in most sections. It is purely casual in winter except along the south shores of Nassau, Queens and Kings Counties and on the larger coastal marshes in New Jersey. Even in these localities it is normally very rare at this season. The most likely

place in our region to find this species in winter is around Jamaica Bay. During mild winters I have heard as many as six birds in one evening near the Floyd Bennett Airfield.

Virginia Rail

Rallus limicola limicola Vieillot

This is by far the best known and most widely distributed of our rails, and it may be expected as a fairly common summer resident over the larger part of the New York City region wherever fresh-water marshes with their beds of cat-tails, grasses and scattered thickets offer concealment. It breeds less frequently along the bushy margins of slow-running streams and in a few localities even on the edges of the extensive brackish marshes. Though more generally distributed throughout our region than the Clapper Rail, it never occurs in as marked local concentrations as that species and the days one records over four or five Virginia Rails are few and far between. Like all rails its presence is most frequently detected by its notes. In the average locality one considers oneself fortunate to see a single individual of this species on any one day, not due to the rarity of the bird but usually because of its excessive secretiveness, its love for the depths of the marsh, and its preferred periods of activity at dawn and twilight. In short, the species is far more common and more generally distributed than many observers realize.

In late March one or two Virginia Rails may occasionally be heard calling in our larger marshlands, but it is probable that these calls come from birds that wintered locally, as the first wave seldom arrives before the third week in April. The peak of the spring flight comes in early May, and at this season in our best rail country in the extensive Troy Meadow marshes of New Jersey I have flushed five and heard over thirty Virginia Rails in a morning of vigorous exploration. Such concentrations are, however, unique. By the last

week in May migration is concluded and most of the resident birds are on territories. The nest is placed on the ground and well concealed in a dense thicket or clump of grass. There is probably but one brood, local egg dates concentrated in late May and early June, with extremes May 4 and July 11. Early in August the southward migration begins, and by late September maximum abundance for the entire year is reached. With the first killing frost in early November most of the Virginia Rails depart. A few regularly linger until Christmas, and some even succeed in wintering. There are now scores of winter records, but it must be realized that this total represents intensive birding by numerous observers for many decades and that the Virginia Rail is indeed a rarity in winter anywhere in our region.

Sora

Porzana carolina (Linnaeus)

The Sora or Carolina Rail is partial to large fresh-water marshes where luxuriant vegetation offers shelter and seclusion. It occurs less commonly along streams, in damp meadows and on brackish marshes. Away from the vicinity of water it is fortuitous. Wherever the required habitat is to be found in the New York City region this short-billed rail is a fairly common transient, especially in early fall when it far outnumbers all other species of rails. In spring it is astonishingly scarce in most of the marshes on Long Island. Its exact status as a breeding bird requires further investigation, but it is undoubtedly very rare at this season since breeding records are sparsely sprinkled over Long Island, Bronx County, Westchester County and New Jersey. By far the best place in our region to look for this species during the breeding season is on the Troy Meadow marshes of New Jersey where it nests regularly.

The Sora has been seen in Van Cortlandt Park, Bronx County, as early as April 3, 1938 (Norse), and at Troy Mea-

dows, New Jersey, as early as April 4, 1935 (Stearns), but it is usually the third week in this month before the first widespread movement arrives. The bulk of the birds passes through before the middle of May, and migration is concluded shortly after. Fortunately the Sora is loquacious in spring, and its plaintive *kerwee* or explosive whinnying sound frequently announces its presence. During early May in the vast Troy Meadow marshes of New Jersey I have often heard several dozen birds in a day, but in most localities such counts are unknown in spring. The nest is placed on the ground or in a tussock not far from water. There is but one brood, the few local egg dates concentrated in late May and early June, with extremes May 12 and June 23. With the coming of August a few southbound birds arrive. Numbers gradually increase until late September when the first light frost brings a marked influx. Within the next two weeks maximum abundance for the entire year is reached. At this season the bird is widely distributed, and a stick or stone tossed into an apparently deserted fresh-water marsh will frequently produce an excited *kek* or *peep*. With the first killing frost in November all Soras normally depart. A few irregularly linger to the end of this month, and I find only five reliable winter records: Van Cortlandt Park, Bronx County, December 26, 1926 (Cruickshank and Ruff); December 15-22, 1935 (Norse); December 26, 1938 (Bronx County Bird Club); Idlewild, Long Island, March 2 and 18, 1935 (Mayer); Heckscher Park, Long Island, March 18, 1936 (Cruickshank).

Yellow Rail

Coturnicops noveboracensis (Gmelin)

This little rail is so secretive and so very difficult to flush that its status in our region cannot be stated with any degree of certainty. I feel sure, however, that it is of much more regular occurrence than the few records would indicate, and

this contention is substantiated by the fact that a large percentage of our records are of birds picked up dead. It is apparently partial to the higher margins of grassy marshes and damp meadows and is of much more regular occurrence in fall than in spring.

I find thirty-four records for Long Island, most of them sprinkled along the south shore. The large majority are concentrated in late September and early October. One bird was seen at Long Beach as early as August 30, 1921 (Bicknell), and the remains of another were found at Jones Beach, November 28, 1935 (McKeever, Sedwitz *et al.*). The following winter records are substantiated with specimens: Sayville, January 17, 1894 (Dutcher); Islip, February 22, 1929 (Ritchie). There are nine spring records, the earliest from Freeport, March 29, 1936 (Breslau), the latest, April 29, 1887 (*vide* Griscom). I find but two records for the remainder of our section of New York State: one collected near Dyckman Street, September 29, 1880 (Bicknell); one found dead on Broadway, October 2, 1881 (Bicknell).

In our section of New Jersey records for this species are few. It was recorded by Thurber (1887) as very rare at Morristown on the authority of a Mr. Fairchild. Herrick reports four or five shot about 1875, and has three specimens in his collection, one labeled Madison, September 17, 1877. Mr. Urner shot one in Union County in the late nineties but did not preserve the date. There is a record from Hackensack, September 30, 1893 (Richards). There are only nine reliable records for this century. The species was seen on the Overpeck marshes on four different occasions between October 4 and November 25, 1920, and a specimen was taken October 11 (J. Weber). One was found dead in Troy Meadows, March 31, 1935 (Eaton and Edwards), and the species has been reported from this locality on the following dates: April 27, 1930 (Urner); May 14, 1933 (Griscom); early May, 1937 (Cant, Hunn and Fables); May 3, 1941 (Eynon and Probasco).

Black Rail

Greciscus jamaicensis stoddardi Coale

In our region this smallest of all North American rails is confined exclusively to the extensive salt marshes along the ocean front where the *Spartina* grasses predominate. It is so tiny and so secretive that it is very difficult to find and is usually seen only when special efforts are made by a group of observers working systematically in its favorite haunts. Griscom listed but seven records, all from Long Island, and suspected its nesting in a grassy marsh at Jones Beach.

I find over two dozen additional Long Island records for the Black Rail in the last twenty years, most of these from along the Jones Beach strip where a nest with eggs was found on June 20, 1937 (Carleton). Young were banded at Long Beach on June 30, 1937 (Beals), and a nest with nine eggs was found there on July 12, 1940 (Mayer). The species undoubtedly nests more regularly and is merely overlooked. I can find no records for our region away from Long Island, but there is no question that the bird has occurred on Staten Island and our section of the New Jersey coast. There are many records for southern New Jersey, Long Island records are concentrated in May and September and possibly indicate the periods of migration through our region. It must be remembered, however, that these two months are the ones during which the most intensive field work is done along the coast and this could account for the disposition of dates. The earliest records are: Jones Beach, April 29, 1939 (Imhof), and May 3, 1933 (Vogt). The latest records are: Dyker Heights, October 14, 1926 (Johnston and F. E. Watson), and Rockaway, October 29, 1939 (Pettit).

Fortunate indeed is the student who has had the luck to see one Black Rail. For years I had tried to record this species but failed. Then while walking across a marsh near Moriches Inlet, Long Island, on September 9, 1939, a specimen flew up

in front of Mr. and Mrs. Cadbury, Mrs. Cruickshank and me. In attempting to catch the bird we flushed some ten Black Rails in less than an hour's time. Several of these birds were surrounded and carefully studied as they skulked about like tiny mice. This is the only record I can find for a concentration of this species. Subsequent trips to the same area within the next two weeks failed to produce a single Black Rail.

Corn Crane

Grus grus (Linnaeus)

An accidental visitant from Europe. Dutcher recorded three specimens taken on Long Island: Oakdale, November 2, 1880; Amagansett, about August 15, 1885; Montauk Point, about November 1, 1888. In addition I find a report of one seen flying over the water off Montauk Point, August 9, 1935 (Breslau).

Purple Gallinule

Poronornis martinica (Linnaeus)

One hundred years ago Giraud regarded this species as extremely rare, but Colonel Pike considered it plentiful. It is now an accidental straggler from the south. There are two definite nineteenth century records from Long Island, the last a specimen taken on Middle Island during the summer of 1879.

A Purple Gallinule appeared on a lake in Central Park on June 19, 1928 (Carter, DuMont *et al.*). It remained for several days and was seen by a score of observers. One was captured in a drainage ditch at Jones Beach, Long Island, June 21, 1934 (Herholdt and Vogt); one was carefully studied in the marshes south of Freeport, Long Island, April 28, 1937 (Cruickshank); one was captured at Southampton, Long Island, July 27, 1938 (C. Cobb), and another was seen at Peekskill, Westchester County, May 31, 1939 (Breslau).

Florida Gallinule*Gallinula chloropus cachinnans* Bangs

This red-billed Mud-hen is a lover of deep fresh-water marshlands where dense beds of cat-tails, pickerel weeds and other aquatic plants give way to numerous open pools. It is almost as shy as a rail and is much more often heard than seen. Patient watching where the species is known to occur will, however, generally reveal a bird or two walking jerkily over some lily pads or swimming across an open stretch of water. Formerly it was a common summer resident in the large suitable marshes in the immediate vicinity of New York City, but with the steady destruction of this type of habitat the species has disappeared, and only a few individuals still try to nest around the metropolis.

At present the Florida Gallinule is an uncommon transient and an even more uncommon summer resident in our region. It is so local both as a breeding bird and as a transient that away from the few good fresh-water marshes it is accidental or unrecorded. On Long Island it has been practically or totally extirpated as a summer resident from Brooklyn, Queens and Nassau Counties, and it is still only a rare local breeder in the eastern sections of Suffolk County. In the rest of our portion of New York State the only breeding birds I know of are the few remaining ones hanging on in the ever-shrinking Van Cortlandt Park marsh in Bronx County and the small colony in the Iona Island marsh in Rockland County. A pair and four young were seen at Grassy Sprain, Westchester County, in July, 1939 (Bull and Preston). With the ditching of the great marshlands of Hudson, Union and Essex Counties in New Jersey the local breeding range of the Florida Gallinule in that state has been pushed westward. There are, however, still a half dozen scattered breeding localities in our section of New Jersey and by far the best place

to find this species within fifty miles of New York City is in the vast Troy Meadow marshes.

A Florida Gallinule was seen at South Haven, Long Island, on March 29, 1932 (Kuerzi), and there are records from several localities for early in April, but the species is purely casual before mid-April, and the first widespread wave seldom arrives before the last week in this month. This spring movement is very light and continues until the third week in May. The nest is placed on a bed of floating vegetation or is suspended a few inches above the water in a thicket of plants. There is but one brood, local egg dates concentrated in late May and early June, with extremes May 14 and July 4. In late August there is a noticeable influx of Gallinules. The species is at its peak of abundance for the entire year in October, and during this month concentrations of over two dozen birds have been reported. With the first killing frost in early November most of the birds rush south. A few individuals irregularly linger into early December, and I find nine records between December 23 and February 12, all from Long Island.

American Coot

Fulica americana americana Gmelin

The comical little Coot is essentially an aquatic bird preferring those sections of ponds, marshes, lakes and rivers where beds of dense vegetation offer places for rapid retreat and concealment. It is, however, a possibility on any body of water and is recorded annually even on some of the salt-water bays and estuaries. It is indeed rare on the open sections of the Sound and on the ocean and its occurrence in either place would be fortuitous.

By far the best place in our region to see the Coot is at the eastern end of Long Island where it is sometimes common in fall. It is uncommon to rare at any other season on Long Island, and I know of only four positive breeding records:

Dyker Heights, Brooklyn, 1924-25 (Nathan *et al.*); Millneck, 1940-41 (Nickelsen *et al.*). Away from Long Island the Coot is rare in spring, uncommon in fall and decidedly rare in summer and winter. Most of the records for our section of New Jersey come from Troy Meadows, the Jersey City Reservoir at Boonton and the Hackensack marshes. Most of our records for Westchester County come from around Croton Point. In 1887 Thurber recorded the Coot as a breeding bird at Morristown, New Jersey, but gave no details. The species was found nesting with Florida Gallinules in the Newark marshes on May 30, 1907 (Abbott). In recent years the only breeding records for New Jersey have come from Troy Meadows and Newton (Uner Ornithological Club).

The first southbound Coots ordinarily reach our region around the middle of September. Numbers increase until late October when maximum abundance for the entire year is reached. In most localities even at this season one should not expect to find over four or five birds in a day, yet in the best sections of eastern Long Island flocks of forty are by no means exceptional, and concentrations of over three hundred have been recorded. After November the Coots disappear from most sections, but on Long Island small flocks regularly linger into January and occasionally remain throughout the winter. These wintering birds generally congregate on sanctuaries where liberal feeding is done. With the first heavy thaw in late February a return movement sets in and it continues to mid-May. This spring flight is, however, sadly poor and in most areas goes unrecorded. A few birds regularly summer, and intensive searching in the few remaining stretches of excellent habitat may possibly reward the observer with new breeding records.



HAEMATOPODIDAE: OYSTER-CATCHERS

American Oyster-catcher*Haematopus palliatus palliatus* Temminck

When this striking shore-bird was a summer resident on the coast of southern New Jersey it apparently wandered into our region regularly as Giraud speaks of collecting specimens on the south shore of Long Island between Raynor South and Babylon. There are five old specimens from Long Island, only the following three with details on the labels: New York Harbor, May 28, 1877 (Lawrence); Ponquogue, March 9, 1880 (Dutcher); Greenport, June 2, 1882 (Dutcher).

In recent years the bird has occurred a number of times in southern New Jersey and at least seven times on Long Island. These recent local records are: Mastic, August 28, 1924 (*vide* J. T. Nichols); Moriches Inlet, May 9, 1937 (S. Raven and Wilcox); June 18-21, 1938 (Wilcox); June 10, 1939 (Wilcox); Orient, May, 1924, May 25, 1927, and May 28, 1929 (all three by Latham).

CHARADRIIDAE: PLOVERS AND TURNSTONES

Lapwing*Vanellus vanellus* (Linnaeus)

An accidental visitor from Europe which has been collected three times on Long Island: Merrick, around Christmas in 1883 (Dutcher); Water Mill, late fall of 1905 (Beebe); Bridgehampton, fall of 1910 (*The Auk*, 1939, Vol. 56, p. 332).

Piping Plover*Charadrius melodus* Ord

Due to heavy spring and summer shooting the Piping Plover came very near extirpation in our region towards the end of the nineteenth century. By the opening years of the

current century breeding birds were actually reduced to a few pairs at the extreme eastern end of Long Island, and it was a very rare transient elsewhere. In 1909 Dr. Stone questioned whether the bird still occurred in the state of New Jersey. No species has responded more encouragingly to protection than the Piping Plover, and to-day it is again one of the characteristic summer birds of the outer beaches.

The Piping Plover is invariably associated with coastal dunes, outer beaches, extensive sand fills and large tidal mud flats. It is a common summer resident over the larger part of the south and eastern shores of Long Island, being confined in the western portions chiefly to the outer strip, although a few birds regularly nest on the larger sandy stretches along the southern rim of the mainland. On the north shore of Long Island the species decreases rapidly as a breeding bird as one works away from the Orient peninsula, and west of Shoreham it is known only as a very uncommon to rare transient. The advance of civilization seems not to have any detrimental effects. In fact in the Jones Beach area the vast fills of sand around the causeways have quickly been accepted as new breeding territory, and a drive along these roadways in spring and summer will invariably produce a dozen or more individuals. The species occurs regularly on the wilder beaches of Staten Island, and a pair or two breed there. A few transients have been recorded along the Sound on the larger beaches of Westchester County, and there is one record for Ossining, 1898 (Fisher). The species breeds commonly along the least-populated sections of the New Jersey coast up to Sandy Hook, and a few birds irregularly wander into Newark and Raritan Bays.

The Piping Plover has arrived on Long Island as early as March 3 (Dutcher), and at Orient, Long Island, as early as March 4, 1903 (Latham), but such dates are abnormal as the species seldom arrives before the last week in this month. The northward movement continues until the end of May,

with the peak coming during the first week in this month. At this season one may occasionally see as many as two hundred individuals in one day along the south shore of Long Island, and during an exceptionally heavy flight I counted over one hundred on one mud flat near Oak Island Beach. Daily counts of twenty or thirty are, however, much more normal along most sections of the coast. The species continues to increase as a summer resident. On the morning of May 21, 1936, a group of us found twenty-three nests with eggs just on the Oak Island section of the Jones Beach strip. The nest is a mere scoop in the sand, occasionally lined with fragments of shells. There is but one brood, local egg dates concentrated in May, with extremes April 24 and July 13. By the second week in July the fall migration is under way, and numbers progressively increase until the period of maximum abundance in mid-August. Although one of the first shore-birds to arrive in the spring, it is one of the first to leave in the fall, and it is actually uncommon after the first light frost in late September and is purely casual after the first killing frost in early November. In recent years more and more individuals have been lingering into November, and aberrant individuals have been recorded at Jones Inlet, Long Island, as late as November 17, 1940 (Cruickshank).

Semipalmated Plover

Charadrius semipalmatus Bonaparte

The little Ring-neck is one of our most abundant migrant shore-birds, and during May, August and September one can rarely pass a day on the mud flats near the coast without seeing over one hundred individuals. Though partial to extensive tidal flats, it is regularly found along the beaches and on the mowed or burned sections of the salt meadows. It is an abundant transient along the periphery of Long Island, on the tidal flats of Staten Island, on the Jersey coast and around sections of Newark Bay. It occurs fairly commonly

especially during the southward migration as far as the tide penetrates. It is seen annually, though in small numbers, along the edges of ponds, rivers and reservoirs throughout the interior. As is true of many shore-birds it passes over all sections of the interior but seldom alights due to the lack of attractive habitat. This statement is substantiated by the fact that during migrations inland lakes drained so as to expose extensive mud flats invariably produce flocks of Ring-necks and other shore-birds within a few days.

The Ring-necked Plover has arrived at Quogue, Long Island, as early as March 23, 1932 (Wilcox), and in several localities as early as the initial week in April, but such dates are unusual as the first light flight seldom comes before the fourth week of this latter month. Numbers steadily increase until the spring peak is reached during the last half of May. At this season several hundred, and at times a thousand or more, may be found in the best localities during a full day of birding. After the first week in June the species abruptly becomes scarce, but small groups of non-breeding birds regularly linger throughout the summer. With the coming of July there is a slight influx and southward migration has commenced. The peak of abundance for the entire year comes in August and early September, and at this time it is not unusual to see a thousand or more Ring-necks in a vigorous day of birding along the south shore of Long Island. During this season the bird is much more widely and generally distributed than at any other time, and it is sometimes fairly common even inland. With the first heavy frost in early October the birds quickly disappear from the interior, and numbers decrease abruptly along the coast. On our larger tidal marshes near the ocean a few birds regularly linger through November. The latest record for our region is from Montauk, Long Island, December 9, 1929 (Wilcox), but individuals on the New Jersey coast just to the south of us have frequently lingered into January.

Wilson's Plover

Pagolla wilsonia wilsonia (Ord)

The Wilson's Plover once nested fairly commonly on the coast of southern New Jersey, but it was unable to withstand heavy shooting and was extirpated as a summer resident by 1886. In the old days it occurred regularly on Long Island but was never very common according to Giraud. A specimen was collected on Long Island as late as 1884, and the species was not recorded in our region again until 1915.

In the last few years the Wilson's Plover has again been found breeding on the coast of southern New Jersey, and it is probable that as the species reestablishes itself as a summer resident there it will occur more regularly in our region. At present it is extremely rare. Inexperienced observers believing a dark bill to be the indisputable criterion are frequently calling dark-billed Ring-necks this rarer species, and I consider the majority of reports before me as unsatisfactory. The following recent records from Long Island by experienced observers are well authenticated: Orient, July 3, 1915 (Latham); Long Beach, May 2, 1918 and May 29, 1919 (Bicknell); Napeague, July 11, 1931 (Latham); Mecox Bay, two seen, one collected, September 17, 1932 (Helmuth); Jones Inlet, September 22, 1938 (Cruickshank); Idlewild, May 26-29, 1931; July 8, 1933, June 11, 1934, September 1, 1933, September 5, 1930 (all by John Mayer); Moriches Inlet, two, May 24, 1941 (Wilcox and Bird Club of Long Island).

Killdeer

Oxyechus vociferus vociferus (Linnaeus)

Due to its noisiness, restlessness and its preference for such places as farm lands, baseball diamonds, extensive lawns and golf courses the Killdeer is one of our best known shore-birds. It is a fairly common transient over the larger part of the

New York City region. It is unquestionably increasing as a summer resident in all sections except near New York City, yet its distribution as a breeding bird remains astonishingly local. On Long Island it is a fairly common summer resident with slight concentrations on the Hempstead Plains and on the semi-cultivated sections of the Jones Beach development. It breeds sparsely on Staten Island and in Bronx, Westchester and Rockland Counties. In New Jersey it is uncommon as a breeding bird within fifteen miles of the Hudson River, but it is widely distributed in suitable habitat elsewhere throughout the state and in places is even locally common. The bird is casual in winter except along the extreme western end of Long Island Sound and around Newark and Raritan Bays.

In very mild seasons a few Killdeer return from the south in late February, but it is ordinarily the second week in March before any widespread flight takes place. This northward movement continues all through April and May, the birds passing by in a succession of small waves and the period of maximum abundance varying from year to year. The nest is placed on the ground and is often merely a depression in pebbles, sand or dirt. There are generally two broods, local egg dates being most prevalent in May, with extremes April 12 and July 31. With the coming of July the southbound movement sets in, and occasionally the highest counts of the year are made during this month. Locally the bird seldom occurs in large concentrations, however, and even at this season flocks of over twenty are exceptional. With the first killing frost in early November migration is virtually concluded, and the bird becomes unknown in the interior and scarce along the coast. On the shores of western Long Island Sound, especially in Westchester, Bronx and Queens Counties, and around Newark and Raritan Bays in New Jersey flocks of one to two dozen regularly winter, but elsewhere in our region the bird is rare or casual at this season.

Golden Plover

Pluvialis dominica dominica (Müller)

In Giraud's day the Golden Plover was a common transient both spring and fall on Long Island. By 1882 it had so greatly decreased that Dutcher obtained only two spring records and in the fall recorded only a few flights between 1886 and 1893. The species went practically unrecorded during the first decade of the twentieth century and thereafter started on a very gradual but steady climb. Griscom writing in 1923 stated: "In recent years 'flights' have been reported but if the lucky observer sees half a dozen birds he calls it a 'flight' or if several observers record a single individual apiece during early September, a 'flight' is said to have occurred." To-day, while by no means common, it is much more numerous than it was twenty years ago, and small flocks are recorded each fall by scores of observers.

The Golden Plover is partial to extensive salt meadows where the grass is short and to plowed fields along the coast. It occurs less regularly on wide tidal mud flats. It is an uncommon but regular fall transient on sections of the Newark Bay meadows and on the south shore of Long Island, especially at the eastern end. It now occurs almost every fall but in small numbers on the Orient peninsula of Long Island, on Staten Island and on the Jersey coast, and somewhat less regularly on the north shore of Long Island and on the eastern shores of Bronx and Westchester Counties. Inland it is casual. Small flocks are irregularly recorded on the plains and fields in the interior of Long Island. Thurber reported it as a rare transient at Morristown in 1886, and Miller saw one on the golf course at Plainfield on November 6, 1921.

The Golden Plover is exceedingly rare in spring. Dutcher gave but two definite records for Long Island: April 7, 1882, and May 10, 1885. John Mayer has had the good fortune of seeing this species on the following five occasions at Idlewild.

Long Island: April 18, 1937; April 22, 1938; May 5-13, 1939; March 31, 1940; May 26, 1940. I find but five other spring records for our region: Atlantic Beach, Long Island, May 23 and 31, 1931 (Woodmere Academy Bird Club); Newark, New Jersey, May 30, 1933 (Urner); Staten Island, May 12, 1940 (Norse); Orient, Long Island, May 24, 1940 (Latham); Shinnecock Bay, Long Island, May 24, 1941 (Bird Club of Long Island). A record of two at Moriches Inlet, July 9, 1938 (McKeever, Sedwitz *et al.*), is hard to allocate as the next records are from Long Island, — August 1 (*vide* Griscom) and Newark Bay, New Jersey, August 4, 1921 (Urner). It is usually the third week in August, however, before the species arrives and not until mid-September that maximum abundance for the entire year is reached. The numbers from year to year vary considerably and are generally correlated with the number and intensity of storms over the ocean during the height of the southward flights. The highest Long Island count before me is from Mecox Bay where "seventy-six arrived on August 29, 1934, and remained in varying numbers until October 5" (Helmuth). The fall of 1932 brought a remarkable widespread flight, and during September flocks of up to three hundred were recorded on the Newark meadows (Urner). Numbers generally diminish during October, and after the first killing frost in early November the species is casual. Aberrant individuals have been seen around Newark Bay as late as November 14, 1926 (Urner), and at Jones Beach, Long Island, as late as November 25, 1934 (Cruickshank, Murdock and W. Weber).

Black-bellied Plover

Squatarola squatarola (Linnaeus)

The handsome Black-bellied Plover is one of the most abundant shore-birds of the outer beaches, the large coastal mudflats and those sections of the brackish meadows where the grass is short. It occurs regularly as far as the tidal waters

penetrate, but it is increasingly less common away from the ocean and strictly accidental beyond the reaches of the tide. It is an abundant transient along the south and east shores of Long Island, becomes uncommon along the Sound west of Eaton's Neck and in the interior of the island is recorded only irregularly as it flies high overhead giving its far-reaching plaintive *ple-oo-ee*. It occurs commonly both spring and fall on Staten Island. In Bronx and Westchester Counties it is confined almost exclusively to the extensive flats along the Sound where it is generally rare in spring and uncommon in fall. It is an abundant transient along the New Jersey coast and a fairly common transient, especially in fall, around Newark Bay. Years of intensive birding have produced dozens of widely scattered records for the Hudson River and for inland mud flats, but away from the coast the bird is very rare and in most inland localities it has never been recorded.

Small flocks of Black-bellied Plover have been seen on Long Island in late March or early April, but such flocks are undoubtedly composed of birds that wintered locally or just a short distance south of us. The bird is exceedingly rare before mid-April, and the first widespread flight seldom arrives before the initial week in May. During the last half of May a spring peak is reached, and at this season one can ordinarily see over one hundred Black-bellies in a day of birding along the coast. During remarkable flights concentrations of several thousand may be recorded. Naturally most of our inland records come during the peaks of migration and most of these are of single birds, rarely flocks as high as forty. By the first days of June the spring movement shows signs of stopping, and by the middle of the month only scattered flocks of chiefly immature birds remain. There are records for every day throughout the summer. Around the middle of July the southward movement begins, yet it is not until a month later that the large flocks start passing through. From mid-August to mid-October the bird is abundant along the

coast, and at this season it is more common and more generally distributed inland than at any other time of the year. With the first killing frost in early November the bulk of the birds rushes south. In recent years an increasing number of individuals along the coast have lingered until the end of this month. I find thirty-six December records, five January records and a record of a flock that passed the winter of 1937-38 on Jamaica Bay, Long Island. The bird now winters annually on the coast of southern New Jersey, and it is probable that within the next two decades the winter records for our region will be far too numerous to list.

Ruddy Turnstone

Arenaria interpres morinella (Linnaeus)

The Ruddy Turnstone or Calico-back has increased markedly under protection and to-day it is a common transient along the coast. It is essentially a bird of the ocean front preferring mud flats, sand bars, rocky peninsulas and breakwaters. It is a very common transient on the south and east shores of Long Island, but is rather scarce along the Sound west of Eaton's Neck and is very rarely recorded flying over the interior of the Island. It is a common transient on the few remaining wild sections of the south shore of Staten Island. Fisher called it accidental at Ossining but to-day in Bronx and Westchester Counties the bird is confined exclusively to the edges of the Sound where it occurs in small numbers during migrations. It is a common transient on the coast of New Jersey and infrequently occurs in small numbers around Newark Bay.

The Ruddy Turnstone has been seen at Oak Island Beach, Long Island, as early as April 30, 1938 (Harrower), and in numerous localities during the opening days of May, but the species ordinarily arrives in a widespread wave during the second week in May and seldom reaches a peak before the

last few days of this month. At this season one can usually see several dozen individuals in a vigorous day of birding along the coast, and during heavy flights I have seen as many as three hundred birds in a day along the south shore of Long Island. After the first week in June the species decreases abruptly, and only stragglers remain through the summer. By the first week in August southbound birds are passing through, and numbers progressively build up to the fall peak which normally comes in September. Though the fall flight is much more extended and the bird is more widely distributed, we rarely get as impressive concentrations as in spring, and the recording of over sixty Turnstones in a day even on our better stretches of coast is unusual. With the first killing frost which usually comes in early November, migration is concluded and the bird rapidly becomes scarce. As the Turnstone increases more and more birds linger through November and into December. One was seen at Sand's Point, Long Island, where the bird is always uncommon, as late as December 26, 1937 (Cruickshank), and another remained around Orient, Long Island, throughout the winter of 1936-37 (Latham).

SCOLOPACIDAE: WOODCOCK, SNIPE,
SANDPIPERS, ETC.

Woodcock

Philohela minor (Gmelin)

In spite of an ever-increasing number of gunners the Woodcock decreases only slightly, and it is still a common transient and a fairly common summer resident in the unsettled sections of the region. It is one of the few shore-birds that is more common away from the coast, and it should be looked for in low, damp woodlands, open alder or willow thickets and moist, brushy meadows. During migrations it is widely distributed and occurs annually even in the parks of New York

City. It is only irregularly recorded along the beaches and in the brackish marshes. As a breeding bird it is widely distributed throughout the wilder sections, decreases towards the metropolis, is naturally scarce in the densely settled suburbs, and very few pairs still nest in Bronx, Queens and Richmond Counties. In a few choice Long Island localities the species is astonishingly common, and in the southeastern corner of Nassau County during the height of the courting season in April, I have heard at least a dozen birds performing above a large, brushy meadow.

In very advanced seasons a few Woodcock arrive as early as the fourth week in February, but the first week in March is a much more normal arrival date and it is not until the end of this month that any pronounced movement occurs. Migrants are passing through well into May. The nest is placed on the ground in woodlands, in brushy thickets and occasionally even in dry, open fields. There is but one brood, local egg dates concentrated in the last half of April, with extremes March 14 and May 28. Vagrant birds are a possibility in any locality at any time during the summer. A few migrants irregularly reach our region in August, but it is not until early September that the southward movement normally begins. The peak of abundance for the entire year comes between mid-October and mid-November. Due to the difficulty of flushing Woodcock they can be easily overlooked. Even at the peak of the fall flight one considers oneself fortunate to see over three birds on any one day, even in the best localities. On the other hand a hunter working over the same section with a well-trained dog will often flush from one to three dozen individuals. A few Woodcock linger into the opening days of December, and in mild seasons some will even brave the winter in the open spring-fed thickets of the lowlands, particularly on Long Island.

European Woodcock*Scolopax rusticola rusticola* Linnaeus

The occurrence of this species in North America is purely fortuitous. A specimen found in Washington Market, New York City, on December 6, 1859 was said to have been killed near Shrewsbury, New Jersey.

Wilson's Snipe*Capella delicata* (Ord)

The Wilson's Snipe is one of our most widely and evenly distributed shore-birds, occurring as a common transient in all fresh-water meadows, marshes and swamps, as well as along the edges of ponds and streams and on the brackish marshes along the coast. Occasionally it will be found on brushy hillsides and in dry fields, but away from the vicinity of soft, moist earth it is purely casual. Unlike most members of its family it rarely ventures out in the open during the day-time, and it is consequently infrequently detected as it crouches motionless in the concealment of low vegetation. A few winter every year, chiefly near the coast. The summer records are few. Crippled birds were reported to have nested years ago near Chatham, New Jersey (Herrick), and a nest was more recently found near Newfoundland, New Jersey (Dugmore). The possibility that a few birds nest regularly in the northwestern section of New Jersey has been suggested, but if so they should certainly be easy to locate as the species is very noisy during the breeding season and every morning and evening puts on spectacular aerial performances.

In advanced seasons Wilson's Snipe will frequently arrive from the south by the end of February. The second week in March is, however, a much more normal arrival date with the peak of the spring flight coming in late March or early April. This northward movement is decidedly more pronounced inland than along the coast. At this season, with a great deal of

splashing through the larger fresh-water marshes, it is not unusual to flush twenty birds in a morning, and on rare occasions remarkable concentrations of over one hundred birds are encountered. In the average large marsh, however, the recording of four to twenty individuals in a day during the best seasons is the maximum that should be anticipated. The northward movement is virtually concluded by the end of April, and only stragglers are passing through as late as the fourth week in May. There is a light sprinkling of June and July records. With the coming of August the southward migration sets in and it continues until the first severe freeze. The largest flights pass through between the middle of September and the end of October. The species is much more common along the coast in fall than it is in spring. The Wilson's Snipe has been recorded locally by several Christmas Census parties each year for the last decade. These birds often remain throughout the winter and are generally confined to warm spring-fed marshes, sewer outlets and coastal estuaries.

Long-billed Curlew

Numenius americanus americanus Bechstein

Eighty years ago this magnificent bird was a regular transient on the shores of Long Island, but by 1880 it occurred only as a rare fall transient, and the last specimen was taken at Montauk, September 9, 1889 (Dutcher). The migration dates were April 28 and July 21 to September 12. The bird was reported as accidental at Ossining years ago.

The following recent sight identifications, all from Long Island, are probably correct: Orient, September 2, 1905 (Latham); Amagansett, June 15, 1922 (Fred Shott *fide* Latham); Fisher's Island, September 10, 1923 (*fide* Ferguson); Quogue, July 10, 1927 (F. E. Watson); Jones Beach, August 6, 1931 (Berliner). Dr. Helmuth has had the extraordinary good fortune of seeing this species on Long Island on six

different occasions: Montauk, August 26, 1910; Mecox Bay, August 24, 1923; Bridgehampton, October 15, 1924; Mecox Bay, September 2 and 7, 1929; Georgica Pond, August 11, 1938.

European Curlew

Numenius arquatus arquatus (Linnaeus)

A casual visitant. A specimen taken on Long Island in 1853 is now in the New York State Museum in Albany.

Whimbrel

Phaeopus phaeopus phaeopus (Linnaeus)

The only specimen of this European species ever captured in the United States was shot near Gilgo Inlet, Long Island, September 4, 1912 (see Miller, *The Auk*, 1915, Vol. 32, p. 226).

Hudsonian Curlew

Phaeopus hudsonicus (Latham)

This is the only curlew one may expect to see in our region. It has shown a gratifying increase in the last twenty years and is now recorded annually during migrations in good sized flocks. A lover of the wide salt meadows and mud flats near the ocean it only irregularly wanders in to the shores of Long Island Sound, Newark Bay and Staten Island, and except for the occasional groups that alight on the larger plains and fields of Long Island it is unknown in the interior. It is such a strong, steady flyer that the majority apparently passes our region without stopping, for the large concentrations of one to several thousand that regularly occur on the coast of southern New Jersey are here unknown. It is much more common in fall than it is in spring, and it is purely casual during this latter season away from the proximity of the ocean.

The Hudsonian Curlew has been recorded in Mecox Bay,

Long Island, as early as April 12, 1939 (Wilcox), and at Long Beach, Long Island, as early as April 17, 1918 (Bicknell), but such dates are very unusual. The first flights ordinarily arrive during the first week in May, and a spring peak is reached around the third week of this month. This spring flight is ordinarily very light and in most sections passes unrecorded. By June migration has normally concluded but a few barren birds regularly linger on our coast and may be recorded any day during the summer. Southward migration starts astonishingly early, light flights occasionally arriving during the last week in June. Southbound birds always arrive by the first week in July, and the period of maximum abundance for the entire year often comes as early as the end of this month. This return flight is much more protracted than the spring one, and many times as many individuals stop off on our coast at this season. Though concentrations of several thousand occur annually on the coast of southern New Jersey, flocks of over one hundred are virtually unknown within our boundaries except for brief periods during or immediately following wild easterly storms. It should be added that one may take several trips to our coast in summer without seeing a single individual. With the coming of the first heavy frost in early October the few remaining Hudsonian Curlews rush for their wintering grounds in South America, yet aberrant birds have lingered at Idlewild, Long Island, up to November 10, 1940 (Mayer), and there is a remarkable record of one on Long Island as late as December 24, 1912 (Bogardus).

Eskimo Curlew

Phaeopus borealis (J. R. Forster)

Griscom's analysis of the status of this unfortunate species is so exact and concise that I quote: "The Eskimo Curlew occurred formerly on Long Island in flights in fall after easterly gales, sometimes in numbers. It is now on the verge

of extinction, if not actually extinct. The last definitely authenticated specimen was shot near Good Ground, Long Island, August 3, 1893. Two more recent records have been proved erroneous, and otherwise we have only a few reports of specimens shot by sportsmen who 'knew the birds well years ago' but who thought nothing of it at the time. Such records are of little scientific value, when a bird almost extinct is involved, especially when some of them have been proved erroneous. One report, however, is worthy of full consideration. Mr. John H. Hendrickson of Jamaica, a veteran sportsman, who knows Long Island shore-birds as well as any one living, and who has added much to our local knowledge of the rarer species believes he saw two birds on September 1, 1913 (see Miller, *The Auk*, 1915, Vol. 32, p. 226)."

There is a "probable record of the Eskimo Curlew . . . at Montauk Point" on September 16, 1932 (R. C. Murphy, *The Auk*, 1933, Vol. 50, p. 101). Two or three other reports in recent years, though interesting, are not in the least convincing.

Upland Plover

Bartramia longicauda (Bechstein)

The Upland Plover or Bartramian Sandpiper is a bird of the wide-open plains and extensive grassy meadows, apparently refusing to remain once such areas have been greatly reduced or divided. Formerly a common summer resident throughout the region it rapidly decreased towards the end of the nineteenth century and by 1923 Griscom wrote: "One of our rarest birds, and in most parts of the area is gone forever." Though still a very rare bird and unrecorded in many sections for years at a time, it has returned as a breeding species to several localities and it is becoming increasingly more common during migrations in a few chosen spots. On Long Island it is now a rare spring and a fairly common fall



transient on the few remaining extensive fields and plains, yet away from such areas, even along the outer strip, it is casual. By far the best place to look for this species on Long Island is on the ever-shrinking Hempstead Plains, especially between Westbury and Farmingdale where from four to six pairs now nest. Indications are that a few pairs breed in the eastern third of Suffolk County, but this still requires definite substantiation. Over the remainder of our section of New York State the species is a very rare or casual transient, yet at least a half dozen pairs nest in Orange County just to the north of us. During the last century the Upland Plover was a common summer resident in many localities in New Jersey. It disappeared from Morristown in 1900, Ridgewood in 1901 and Summit in 1904. In recent years one or two pairs have probably bred on the ditched sections of the Newark marshes. It has been estimated that some twenty pairs now nest in central New Jersey, six pairs around Lamington. As a transient the bird is rarely recorded away from the fore-mentioned localities. It is most common around Newark Bay, and as many as fifty-five birds have been seen there in a single day in August.

The Upland Plover has been seen at Elizabeth, New Jersey, as early as April 3, 1926 (Urner), at Woodmere, Long Island, as early as April 4, 1931 (Woodmere Academy Bird Club), and at Heathcote, Westchester County, as early as April 6, 1931 (Phillips). The species ordinarily arrives around the middle of April, and by the middle of May migration is concluded. This spring movement is very light and usually goes unrecorded away from the breeding grounds. As soon as the birds return to their nesting territories the air is filled with their weird, never-to-be-forgotten whistle, sounding like the wailing of a distant gale. The nest is placed on the ground. There is but one brood, the few local egg dates falling between May 2 and June 6. Southward migration begins as early as the second week in July, and what might hesitatingly

be called the period of maximum abundance is reached in late August. Even at this time the largest flocks are seldom composed of more than twelve birds. After the first light frost in late September the Upland Plover is extremely rare, yet a few irregularly linger to the middle of October and one remained near Hicksville, Long Island, as late as October 28, 1938 (Cruickshank).

Spotted Sandpiper

Actitis macularia (Linnaeus)

The Spotty or Teeter-tail is even more generally known than the Killdeer, for it is a fairly common, though somewhat local, summer resident over the larger part of our region from the outer strip of Long Island to the edges of ponds and streams in the highlands of northwestern New Jersey. It is an adaptable species, frequenting the shores of both fresh and salt-water bodies and even accepting low, wet meadows with only square yards of water. As a nesting bird it has virtually disappeared from the metropolis and other urban developments, but even in such places it occurs regularly along park ponds during migrations.

The Spotted Sandpiper has been seen at Woodmere, Long Island, on the remarkable date of April 8, 1929 (Woodmere Academy Bird Club), at Idlewild, Long Island, April 16, 1939 (Mayer), and at Elizabeth, New Jersey, April 16, 1922 (Urner). Such dates are, however, exceptional, as the species ordinarily arrives in a widespread wave during the fourth week in April. A spring peak is reached during the second week in May, and migrants are passing through to the end of this month and casually later. The species nests singly, rarely in small colonies. The nest is placed on the ground. There is but one brood, local egg dates concentrated in the last two weeks of May, with extremes May 9 and June 27. Southbound birds start passing through as early as the first week in July, but maximum abundance is not reached until the middle of

August. Though a fairly common and widely distributed species, it never occurs in large concentrations. One will seldom see over one dozen Spotties on any one day, and a count of thirty even during the peak of the southward movement is exceptional. After the first week in September the species is rare in the interior. Along the coast, however, a few regularly linger into October, and stragglers have been seen in Bronx County as late as November 9, 1937 (Sialis Bird Club), and at Newark, New Jersey, as late as November 14, 1937 (Ajello).

Eastern Solitary Sandpiper

Tringa solitaria solitaria Wilson

This is the only one of our transient shore-birds that habitually frequents the streams and ponds of heavily forested areas, occurring regularly even along brooks that run through climax woodlands in the highlands of northwestern New Jersey. It is a fairly common transient wherever fresh water is found, but it is much less common near the coast and it is indeed unusual along the beaches, the salt marshes and the brackish inlets. It does not take to civilization, and relatively few alight in the crowded metropolitan area. While by no means solitary this species is definitely less gregarious than most waders, and it is seldom encountered in groups as high as ten.

The Solitary Sandpiper has been seen in Bronx County as early as April 7, 1929 (Black), and in scattered localities within the next two weeks, but it is normally the last week in April before the initial wave arrives. A spring peak is reached during the second week in May, migration is normally concluded by the end of the month, and only stragglers remain until the second week in June. Southbound birds have reached Kingsland, New Jersey, as early as July 5, 1920, (Rogers) and Dyker Heights, Brooklyn, July 6, 1927 (Du-

Mont). It is usually mid-July before the first fall birds arrive, and the majority wait until the last half of August to pass through. After the first heavy frost in early October the Solitary Sandpiper is a rarity, yet one bird lingered at Idlewild, Long Island, to November 16, 1936 (Mayer), and a partially crippled individual was present in Van Cortlandt Park, Bronx County, as late as November 18, 1934 (W. Weber).

Eastern Willet

Catoptrophorus semipalmatus semipalmatus (Gmelin)

Western Willet

Catoptrophorus semipalmatus inornatus (Brewster)

Mr. Griscom is now making a study of the status of the two Willets on the Atlantic seaboard, and a great deal of what I say on this subject is based on a recent discussion with him. It appears that all of our spring birds in the New York City region are Eastern Willets. To my knowledge the Western Willet has never been collected locally in spring nor can I find any claim of a sight identification at this season. On the other hand practically all of our fall Willets belong to the Western race. To my knowledge the Eastern Willet has never been collected in our region in the fall, and I can find only one convincing sight identification for this season — a bird seen with a flock of ten Western Willets in Mecox Bay, September 9, 1934 (Wilcox).

One hundred years ago the Willet was a common visitor to Long Island, and though a few birds may have bred, evidence is lacking. Numbers quickly fell off during the latter part of the nineteenth century, and the bird was known only as an exceedingly rare spring and an irregular fall transient. There has been a slight increase in the last two decades. At present it is a rare spring and an uncommon but regular fall transient along the south and east shores of Long Island.

In fall a few occur irregularly along the north shore as far west as Eaton's Neck and casually as far west as Flushing Bay. There are three recent May records and a score of fall ones for Staten Island. In Bronx and Westchester Counties it is a very rare fall transient along the Sound, and whereas there are no spring records for these localities I know of two from Fairfield County, Connecticut, just a few miles north of our boundaries. One was shot as far inland as Riverdale, Bronx County, September 7, 1880 (Bicknell). Over two hundred have been counted in June, breeding on eleven miles of marsh as far north as Fortescue, New Jersey. In our portion of that state, however, the Willet is a very rare spring and a surprisingly uncommon fall transient along the coast and around Newark Bay.

A remarkable flock of nineteen Willets arrived at Westhampton Beach, Long Island, as early as April 28, 1937 (Wilcox). The bird seldom arrives before the second week in May, and the large majority of records are concentrated in the last two weeks of this month. The sprinkling of records through June and early July are probably referable to the eastern race. The fall movement of Western Willets generally starts during the second week in July and reaches a peak during the last two weeks in August. Numbers vary considerably from year to year. The highest local count is forty-six. With the first heavy frost in early October the few remaining Willets usually rush south, but in recent years more and more birds have been lingering into October and I find a record for Jones Beach, Long Island, as late as October 29, 1939 (J. Elliott).

Greater Yellow-legs

Totanus melanoleucus (Gmelin)

This large, vociferous shore-bird is partial to coastal bays, estuaries and marshes where ebbing tides leave muddy flats and small pools, yet it occurs almost as commonly along the



fresh-water ponds near the coast. It is a common transient both spring and fall as far as the tide penetrates, and, though it occurs annually around marshes, lakes, rivers and reservoirs throughout the interior, it is progressively less common and more irregular away from the coast.

Due to the fact that a few birds occasionally winter it is difficult to say just which record constitutes the earliest arrival from the south. The first widespread wave generally arrives during the last week in March. Numbers, though fluctuating considerably, usually increase as April progresses and by the first week in May a spring peak is reached. At this season it is not unusual to see over one hundred birds in a day along the south shore of Long Island, but away from the coast counts of over thirty in a day are not frequent, and in most inland localities the species is seldom seen in groups of more than six. Migration is virtually concluded by the end of May and the bird disappears from the interior. A few non-breeding birds regularly remain along our coast throughout June and July, and it is therefore impossible to give definite information as to just when the last northbound birds depart and the first southbound birds arrive. The species is scarce between June 10 and July 10, and the overlapping apparently takes place during the week joining these two months. The height of the fall movement normally comes in late August or early September. With the first killing frost in early November the Greater Yellow-legs usually disappears from the interior and becomes scarce along the coast. In recent years a few birds along the coast have been lingering into December, and for the south shore of Long Island there is a sprinkling of records of the bird's occurrence during every week in winter.

Lesser Yellow-legs

Totanus flavipes (Gmelin)

In the New York City region the Lesser Yellow-legs is primarily a coastal species, being partial to brackish meadows

stippled with mud flats and pools. It occurs commonly as far as the tide penetrates and uncommonly around rivers, lakes and reservoirs throughout the interior. It must regularly fly over all sections of the interior, for in season as soon as ponds or lakes are drained so as to expose large mud flats the bird appears and often becomes locally common. Unlike its larger relative the bulk of migrants passes up the Mississippi valley, and consequently in our region it is a rather rare bird in spring. There has been a definite increase in recent years. It is now recorded every spring, and from early July to the end of September it is one of the seven most abundant shore-birds along the coast.

Everywhere in our region the Lesser Yellow-legs is a rare bird in spring, and I have good reason to suspect that the numerous reports handed in by inexperienced observers are largely creations of a fertile imagination. Reliable records indicate that the species passes through between late March and early June with the majority of records coming during the last week in April and the first half of May. These for the most part represent one or two individuals apiece, the highest, a count of twenty-five from Newark Bay, May 12, 1934 (Urner). There are records for every day in June. A careful study of all data makes it quite evident that southbound birds sometimes arrive as early as the fourth week in June. The first major flights reach our region in early July. Several pronounced waves occur during the next two months, and maximum abundance for the entire year usually comes in late August or early September. The species is not only more numerous than the Greater Yellow-legs but it is decidedly more gregarious, and at the height of the southward flight several hundred have been observed on one coastal flat. The highest counts come from Union County, New Jersey, where Mr. Urner recorded many July, August and September flocks of over two hundred with a maximum of six hundred on September 15, 1929. With the coming of the first heavy frost

in early October most of the birds disappear. In recent years, as is true of most shore-birds, individuals have been remaining remarkably late. There are now many November and December records of the Lesser Yellow-legs for Long Island, and birds have been carefully identified by numerous observers at the Hempstead Reservoir all through the winter of 1935-36, all through January, 1939, and up to January 16, 1940. Four remained in Mecox Bay during the winter of 1938-39 (Helmuth, Wilcox *et al.*), and another wintered at Alley Creek in northern Queens County during 1939-40 (Queens County Bird Club).

American Knot

Calidris canutus rufus (Wilson)

The Knot or Robin Snipe is confined almost exclusively to the coast where it generally resorts to beaches, extensive tidal flats and shallow pools. According to reports it formerly occurred by the thousands in compact flocks, but it was unable to withstand heavy shooting both spring and fall and by 1915 it was a decidedly uncommon bird. In recent years there has been an encouraging increase, and in many localities it is now a common transient both spring and fall. On Long Island it is a common transient along the south and east shores, becomes increasingly uncommon westward along the Sound and west of Fort Salonga it is an astonishingly rare bird. It is becoming increasingly common on the south shore of Staten Island. Very few stop off on the eastern shores of Bronx and Westchester Counties. In our section of New Jersey it is a common transient along the ocean and decidedly uncommon around Newark Bay. I find no records for the interior of our region and the bird's occurrence there would be entirely fortuitous.

The Knot has been seen at Long Beach, Long Island, as early as April 29, 1920 (Bicknell), and in several localities early in May, but it is one of the last transient shore-birds

to arrive and it is frequently unrecorded before the middle of May. Most of the birds pass through before the second week in June. The status of the bird for any one spring depends entirely on whether the great flights stop off or pass right by. Even in the best localities one is delighted to see twenty or thirty Knots on any one day in late May, and concentrations of several hundred are rare memorable occasions. A few individuals are recorded each year throughout June and July but which ones are vagrants and which are bona fide migrants it is difficult to ascertain. Indications are that the northward movement is virtually concluded by mid-June and that the southward movement commences during the second week in July. The peak of the fall migration ordinarily comes during the first half of August and at this season flocks of several hundred are not infrequent. With the first heavy frost in early October most of the birds depart. Until recently the Knot was unknown after the end of October, but now small flocks regularly linger through November. There is a record for Oak Island Beach, Long Island, December 24, 1939 (J. Elliott), one for Shinnecock Bay, Long Island, December 26, 1937 (Sedwitz), and there are now many January records for the coast of New Jersey just to the south of us.

Purple Sandpiper

Arquatella maritima (Brünnich)

The name Winter Rock-snip gives a concise, accurate picture of this species, for it is our only regular winter shore-bird and it is extremely rare away from a bold, rocky, wave-beaten coast. It has shown a marked increase in the last twenty years. On the south shore of Long Island it is confined almost exclusively to the large rock jetties, and as more of these artificial breakwaters are constructed and given time to acquire a population of small molluscs and a growth of rock-weeds the Purple Sandpiper becomes increasingly common.

It is accidental on sandy beaches and mud flats. A flock of thirty might pass the winter on a large stone jetty, and yet one quarter of a mile on either side of this projection not one individual is recorded. The species is regular on the rocky shores of eastern Long Island, but considering the rocky nature of the north shore it is surprisingly rare along the Sound west of the Orient peninsula. The bird is casual on Staten Island. Until a decade ago there was only one record for Bronx County and none for Westchester County, but the species has gradually come in to some of the jetties along the Sound and it is now recorded there every winter, especially at Rye Beach. I cannot find a single record for our section of New Jersey, but this is unquestionably due to the lack of intensive birding in winter north of Asbury Park. There is only one record away from saline waters: twelve, Prospect Park Lake, Brooklyn, December 11, 1938 (Breslau).

The Purple Sandpiper has arrived at Orient, Long Island, as early as September 7, 1936 (Latham), and at Atlantic Beach, Long Island, on October 9, 1937 (Cruikshank). The species usually does not arrive until after the first killing frost in November and departs during March, and the records from localities where the bird is very rare or casual are principally in these two months. The highest local count is from Rye, Westchester County, where a flock of one hundred was seen on December 1, 1940 (Oboiko and Eisenmann). This number is, however, unique as the bird rarely occurs in flocks of more than twenty and more generally in groups of less than ten. By the end of March most of our Purple Sandpipers have departed, but aberrant individuals irregularly linger through April, and I find a record for Atlantic Beach, Long Island, as late as May 22, 1938 (Mayer). One was collected at Gardiner's Point, Long Island, on the remarkable date of July 28, 1925 (Ellis).



Pectoral Sandpiper*Pisobia melanotos* (Vieillot)

The Pectoral Sandpiper has shown a decided increase in the last twenty years, but from all accounts it is still not as common as it was prior to 1900. It is partial to the upper margins of the salt marshes where numerous small pools and mud flats are concealed by grasses. It is, however, very adaptable and will alight on extensive tidal flats, beaches and even in fresh-water meadows or moist upland fields. It is uncommon to rare spring and a common fall transient on the south and east shores of Long Island, on Staten Island, on the New Jersey coast and around Newark Bay. On the marshes bordering both sides of the Sound it is decidedly rare in spring and uncommon in fall. Though irregular in the interior, it has now been recorded around numerous lakes, streams, marshes and reservoirs, and there is no point in listing these records in detail.

The Pectoral Sandpiper has been seen at Newark Bay, New Jersey, as early as March 18, 1928 (Edwards and Uerner), and on Long Island as early as March 22 (Dutcher), but these dates are remarkable as the species seldom arrives before the middle of April. The spring flight is very light, the majority of records coming around the middle of May. Even at this season a record of over twenty in a day is exceptional. Between June 10 and July 4 the species is everywhere scarce or unrecorded, the scattered individuals that intermittently show up giving no clue as to whether they are northbound, southbound or merely vagrants. The southward movement which ordinarily starts during the second week in July is decidedly more pronounced, the species often being locally common. Maximum abundance is generally reached around mid-September, at which time flocks of from one to two hundred are occasionally reported from the south shore of Long Island, the Jersey coast and around Newark Bay. The Pectoral Sand-

piper is a rare bird after mid-October, yet individuals sometimes linger into November, and one was seen at Idlewild, Long Island, as late as December 3, 1939 (Mayer).

White-rumped Sandpiper

Pisobia fuscicollis (Vieillot)

In 1923 Griscom wrote: "There seems to be considerable misapprehension about the status of this species in spring, as neither Braislin nor Eaton mention it as occurring at this season. The facts are, however, that it is by no means rare in spring, and can be observed annually in May on the beaches near New York City, if sufficient scrutiny be given the abundant flocks of 'Peep'." Even if the species was formerly overlooked there can be no question that it has increased to a marked extent in the last score of years, and it is now tolerably common in spring and common to abundant in fall in some of our coastal areas. It is a lover of that portion of our coast where mud flats join a thin scattering of *Spartina* grass, and it is generally found associating with the multitudes of Least and Semipalmated Sandpipers. It is fairly common in spring and common to locally abundant in fall on the south and east shores of Long Island, on Staten Island, on the coast of New Jersey and around Newark Bay. It occurs much less commonly on both sides of Long Island Sound. There are now records for the mud flats along the Hudson River, around several reservoirs in Westchester County, around Hempstead Reservoir on Long Island and on the Troy and Hackensack marshes of New Jersey, but away from the penetration of tidal waters the species is still accidental.

The White-rumped Sandpiper has arrived at Oak Island Beach, Long Island, as early as April 28, 1935 (Sedwitz). The spring movement is variable but generally very light, and it takes place principally during the last three weeks in May. By June 10 migration is normally concluded. Near the ocean,

however, a few non-breeding birds regularly linger through June and July, again rendering it impossible to draw any definite lines of demarcation for the ending of the northward or the beginning of the southward migrations. By the middle of July light fall flights are unquestionably arriving. During most of the southward movement one is fortunate to find over a dozen White-rumps in any one locality, but during the height of migration in September there are flight days when one hundred, rarely four hundred, are recorded in the choicest sections along the coast. With the first killing frost in early November the few remaining White-rumps generally rush south. On the south shore of Long Island, however, a few birds regularly linger to the middle of November, and there is a record for Mecox Bay as late as December 1, 1935 (Helmuth).

Baird's Sandpiper

Pisobia bairdi (Coues)

Due to its close resemblance to other members of the genus the Baird's Sandpiper is undoubtedly frequently overlooked, yet it is unquestionably one of the rarest shore-birds in the New York City region. It is only fair to mention that very few observers are competent to identify positively this species in the field and that a large percentage of reports are not worth a moment's consideration. The bird is usually found in the drier portions of the coastal flats or cut-over meadows and most records are of single birds. Dr. Helmuth, who is one of our veteran observers, reports, however, seeing eighteen at East Hampton, Long Island, on September 16, 1933.

The Baird's Sandpiper is an accidental spring and a rare fall transient along the south shore of Long Island. It is a rare fall transient at Orient, on our section of the New Jersey coast, around Newark Bay, on Staten Island and it is purely casual elsewhere. I can find only one reliable record from

the interior: South Plainfield, New Jersey, May 21, 1938 (Stearns).

There are only twenty-seven spring records, all but one from the south shore of Long Island. A record of one at Oak Island Beach, Long Island, April 30, 1938 (Harrower and Jacobson), is the earliest, and a record of one at Jones Beach, Long Island, June 14, 1931 (Sedwitz and Wolfram), is the latest. The bird is much more common in the fall. Ninety per cent of all our records are concentrated in September with extremes from Long Beach, Long Island, July 16, 1939 (Allyn, Sedwitz and Whitman), and Shinnecock Bay, Long Island, October 31, 1894 (Braislin).

Least Sandpiper

Pisobia minutilla (Vieillot)

The Least Sandpiper not only has the distinction of being our smallest shore-bird but also of being one of the first migrants to arrive from the north on its southward migration. It is unquestionably one of the five most abundant shore-birds and while most numerous on the salt meadows and mud flats along the coast, it also occurs on beaches, along the margins of all tidewaters and even inland wherever there are marshes, rivers or lakes with inviting stretches of wet, soft earth. Away from the coast, however, it becomes progressively less numerous, is considered uncommon and irregular beyond the reaches of the tide, and is decidedly infrequent in the highlands of the interior.

The Least Sandpiper has been seen at Oak Island Beach, Long Island, as early as April 3, 1936 (J. Elliott), and in several localities during the second and third weeks in April, but it is ordinarily the closing days of this month before the first widespread wave arrives. The height of the spring movement comes during the last three weeks in May, and at this season one can rarely pass a day on the marshes and mud flats along

the south shore of Long Island without seeing fifty to one hundred individuals. During exceptional flights, from five hundred to one thousand birds are recorded. Though breeding far to the north of us, the species is regularly recorded all through June. Southbound birds definitely arrive as early as the fourth week in June. During July, August and September series of waves pass by, and while maximum numbers are a possibility in any one of these months they are most frequent in late July. After the first heavy frost in early October the species becomes scarce, yet individuals along the coast irregularly linger to the end of the month, and I find a record for Jones Beach, Long Island, as late as November 18, 1934 (Sedwitz), and several records for December from the New Jersey coast just to the south of our boundaries.

Curlew Sandpiper

Erolia testacea (Pallas)

An accidental straggler from the Old World. Griscom could find no twentieth century records but wrote, "The bird was known to our early ornithologists, and Giraud states that about ten specimens had been obtained in Fulton Market all from the 'ever productive shores of Long Island.' More recently a female was taken May 24, 1883, on Shinnecock Bay, and another specimen was sent to Mr. Dutcher by mail June 9, 1891, presumably from Long Island."

In recent years this species has occurred an astonishing number of times on the south shore of Long Island, and the preponderance of records from the Jones Beach-Oak Island area is undoubtedly due only to the thoroughness and frequency with which that stretch is worked. The Jones Beach-Oak Island records are as follows: August 7, 1932 (Herbert, Jaques, Vogt); June 27 through August 30, 1937 (Allyn, Elliott *et al.*); May 21 through May 30, 1938 (Cruickshank, Sedwitz, Vogt *et al.*); August 6, 1938 (Mayer); May 28 through

31, 1939 (J. Elliott, Bull *et al.*); July 16, 1939 (Mayer, Rose *et al.*); January 28, 1940 (Breslau).

A bird was collected on Fisher's Island on the remarkable date of December 19, 1923 (Fuertes), and another at Water Mill, Long Island, on September 7, 1923 (Helmuth). In addition I find the following sight identifications from Long Island: Long Beach, September 3, 1927 (Watson), and two, May 11, 1941 (Allyn, Breslau, Sedwitz); East Hampton, October 11, 1930 (Helmuth); Bridgehampton, two, September 17, 1932 (Helmuth); Mecox Bay, September 13, 1932 (Helmuth), and October 1, 1939 (Breslau, Helmuth, Sedwitz).

European Dunlin

Pelidna alpina alpina Linnaeus

This Old World representative of our Red-backed Sandpiper is an accidental straggler from Europe. One specimen taken on Shinnecock Bay, Long Island, September 15, 1892, and identified by Dr. F. M. Chapman.

Red-backed Sandpiper

Pelidna alpina sakhalina (Vieillot)

Abundant one hundred years ago this unsuspecting shore-bird could not withstand hunting that boasted of over fifty being killed by a single discharge, and consequently by the early years of this century it became a rarity. With the abolition of shooting, however, the species commenced to return, and it is now so regular that Griscom's statement, "For years the discovery of this species near New York City meant a red-letter day for the enthusiast", is difficult to comprehend. It is principally a bird of the coast, resorting most frequently to grassy salt marshes and mud flats.

To-day the Red-backed Sandpiper is a fairly common spring and a common fall transient along the south and east shores of Long Island and on the New Jersey coast. It is much

less common, especially in spring, on both sides of Long Island Sound, along the East River, on Staten Island and around Newark and Raritan Bays. It occurs rather regularly as far as the tide penetrates, but it becomes progressively scarcer away from the coast and is purely casual beyond the reaches of the tide. There are now records for the Hudson River, for Kensico Reservoir in Westchester County and for several fresh-water localities in New Jersey, some as far inland as Boonton.

The Red-backed Sandpiper, though fairly common in spring in the proximity of the ocean, is frequently very uncommon to rare at this season in such places as Newark Bay and along the Sound. The numerous early April dates undoubtedly represent birds that wintered locally or just to the south of us, as spring-plumaged birds rarely arrive before the closing week in April, and most of the birds pass through during the last half of May. Even at the peak of the northward movement a count of over twenty birds is considered good, yet periodically remarkable flights occur and one hundred or more are seen in a single brackish marsh. The species is very rare after the first week in June, but every year now a few birds along the coast linger throughout the summer. Small southbound flocks infrequently reach our latitude in August. The Red-backed Sandpiper is, however, one of the last of our transient shore-birds to pass through in the fall, and it seldom comes in numbers before the second week in September. The period of maximum abundance extends from mid-October to early November at which time hundreds are regularly recorded in a day on the better coastal marshes. As fall progresses the birds get so pale that they are popularly known as Lead-backs. Along the coast proper small flocks regularly linger through December, and, though the bird is extremely rare in winter, there are now so many records for this season that it would be redundant to list them.

Eastern Dowitcher*Limnodromus griseus griseus* (Gmelin)

With the abolition of spring shooting the Dowitcher started on a remarkable comeback that has elevated it to the status of one of the most abundant transient shore-birds in our region. It is a lover of the sloppiest mud flats and shallow pools along the coast. It is an abundant transient on the south and east shores of Long Island and on the better sections of the New Jersey coast. It is a fairly common transient on Staten Island and on both shores of the Sound, but it becomes progressively less common westward along the Sound and it is astonishingly rare in spring west of Eaton's Neck. It is one of the most common transient shore-birds around Newark Bay, especially during the southward movement. There have been reports of the species from a few inland localities, but in several cases the birds have proved to be Wilson's Snipe and in most other cases the evidence points in this direction. A record of four near Leonia, New Jersey, August 1, 1925 (Kassoy), is authentic.

The Dowitcher has been seen at Long Beach, Long Island, as early as April 11, 1936 (Cruickshank), and at Idlewild, Long Island, April 19, 1941 (Mayer), but such dates are very unusual as the species rarely arrives before the initial week in May. The major part of the spring migration takes place during the last two weeks in May, and at this season one will often see several hundred and at times over one thousand in a vigorous day of birding on the extensive mud flats along the coast. Migration has normally ended by the second week in June, and only a few non-breeding birds remain along our coast for the remainder of the month. During the fourth week in June the southward movement sets in. Numbers rapidly increase until maximum abundance for the entire year is reached during the last two weeks in July. During August numbers gradually drop off, but there is often a noticeable influx again in early September. With the first severe frost

in early October the Dowitcher becomes very scarce. In recent years a few birds along the coast have been lingering into November, and two aberrant individuals stayed at Jones Beach, Long Island, as late as November 19, 1935 (Cruickshank).

Long-billed Dowitcher

Limnodromus griseus scolopaceus (Say)

This western subspecies might possibly be much more common in our region than the few collected specimens indicate, and again it may be much less common than the recent boom in sight records suggests. To separate our dowitchers in the field is a delicate task. Most specimens are inseparable in the field, and recent studies indicate that a third race is probably involved. It is only fair to say that very few observers are capable of positively identifying even extreme specimens in the field and that even with the most expert observer the chance of error is high. The note is probably reliable but even this awaits substantiation. It is therefore obvious that some of the dates accredited to one race may well be referable to the other.

There are a few collected specimens of the Long-billed Dowitcher from Long Island, and in recent years there have been numerous sight reports by experienced observers from along the south shore. The only definite spring record is a bird taken March 20, 1866 (Lawrence), but I find several sight identifications made in April. During the southward migration specimens have been collected between July 16 and November 30 (Dutcher). Recent sight identifications extend from Jones Beach, July 1, 1934 (Vogt), to Mecox Bay, December 4, 1938 (Rose). Most of the records come after August, and it is the local consensus of opinion that the Long-billed Dowitcher is much more regular than the Eastern Dowitcher after the initial week in October. Away from Long

Island, I find no convincing records for our section of New York State, although the bird has undoubtedly occurred. There are numerous sight identifications from the south Jersey coast, and a few from Newark Bay ranging from September 9 to November 5.

Stilt Sandpiper

Micropalama himantopus (Bonaparte)

Griscom suggested that this species was formerly overlooked, but that such a distinct bird should have been missed by ornithologists who even separated our dowitchers seems highly improbable. The Stilt Sandpiper apparently has never been common in our region and in recent years has shown only a slight increase. Locally it is a bird of the coast, preferring to take advantage of its long legs to carry it into the depths of muddy pools. It is indeed accidental in spring, and I find only four records of its occurrence during this season: Long Island, May 18, 1885 (Dutcher); Sagaponack, May 25, 1935 (Helmuth); Newark, April 28, 1935, and May 8, 1937 (Urner). To-day it is a fairly common fall transient along the south shore of Long Island but it is subject to extreme variations, being almost absent some years and locally common in others. In our section of New Jersey it is a decidedly uncommon fall transient along the coast and around Newark Bay. On both shores of the Sound and on Staten Island it is a very rare fall transient. Inland it is purely casual and I find only two records: Boonton, New Jersey, August 6, 1933 (Berliner, Friedle, Watson); Titicus Reservoir, Westchester County, August 10, 1939 (Pangburn).

The Stilt Sandpiper has been seen at Jones Beach, Long Island, as early as July 1, 1937 (Carleton and Stephenson), and July 2, 1939 (J. Elliott), but it is usually the fourth week in this month before the first birds arrive. August produces any heavy waves that might occur. The Stilt Sandpiper is.

however, never numerous, and a count of seventy-five around the Jones Beach Sanctuary pond on August 1, 1933 (Hickey, Thomas, Vogt), is unique. The species becomes increasingly scarce during September and virtually disappears before the end of this month. I find records for Shinnecock Bay, Long Island, October 16, 1929 (Helmuth), and Jones Beach, Long Island, October 20, 1935 (Sedwitz and W. Weber).

Semipalmated Sandpiper

Ereunetes pusillus (Linnaeus)

The Semipalmated Sandpiper, unquestionably our most abundant transient shore-bird, is partial to the extensive marshes and mud flats near the coast. It is an abundant transient on the south and east shores of Long Island, on Staten Island, on the New Jersey coast and around Raritan and Newark Bays. It occurs commonly on both shores of Long Island Sound and the East River. It is seen regularly as far inland as the tide penetrates, but it becomes progressively less numerous away from the coast. It is less common inland, especially in spring, than the Least Sandpiper, but it apparently passes over all sections of the interior for in season whenever excellent fresh-water mud flats are exposed the species soon appears in small numbers.

The Semipalmated Sandpiper has been seen at Jones Beach, Long Island, as early as April 3, 1938 (Jacobson, Sedwitz, Shainin), and at Orient, Long Island, April 15, 1922 (Latham), but such dates are unusual as the species seldom arrives before the last few days in April, and it is never common until the second week in May. Most of the birds pass through during the last half of May, and at this season it is almost impossible to pass a day of vigorous birding on the larger tidewater flats along the south shore of Long Island without seeing over five hundred birds. Concentrations of over a thousand are not infrequent, and during heavy flights

several thousand may be seen in a day in the choicest localities. With the coming of June numbers rapidly diminish, yet flights occur well into the month and sometimes apparently overlap the southward flights which often start as early as the last week in June. The fall movement is always heavy and rather extended, large flocks being present from mid-July to mid-September. After the first heavy frost in early October the species rapidly becomes scarce, but in recent years individuals have been remaining extraordinarily late. There is a record from as far inland as Boonton, New Jersey, for November 9, 1930 (Walsh); one for Bronx County for November 21, 1933 (Drescher and Kessler), and one for Long Island as late as December 7 (*vide* Chapman). There are several winter records for the New Jersey coast just to the south of us.

Western Sandpiper

Ereunetes mauri Cabanis

In our region this western relative of the Semipalmated Sandpiper is usually associated with the latter bird from which it is difficult to separate. The two not only look almost alike and flock together, but their habits are virtually identical and their distribution locally is proportionately the same. Probably no bird is more often misidentified. It is a very rare spring and a fairly common fall transient on the south and east shores of Long Island, on Staten Island, on the New Jersey coast and around Newark Bay. It is much less common on both sides of the Sound and along the East River and irregularly wanders in to the farthest reaches of the tide. The bird has undoubtedly occurred at numerous points inland but has been overlooked. I find records for Central Park, September 1, 2 and 18, 1931 (F. E. Watson).

It should be noted that to my knowledge no specimens have ever been collected in our region in spring. There are, however, many sight records. The bird has been seen at Long

Beach, Long Island, as early as April 25, 1919 (Bicknell), but most of the spring dates fall within the last two weeks in May. There are reports sprinkled through June and early July. The beginning of the southward migration averages much later than that of the Semipalmated Sandpiper, and the first flight is not to be expected until the middle of July. Maximum abundance for the entire year comes between August 20 and the end of September. At this season the bird is often locally common, and hundreds have been seen in a day on the south shore of Long Island and around Newark Bay. After the first heavy frost in early October the bird becomes very scarce, but small flocks linger into early November with much more frequency than the Semipalmated Sandpiper, and the species has been seen at Freeport, Long Island, as late as November 25, 1940 (Cruickshank).

Buff-breasted Sandpiper

Tryngites subruficollis (Vieillot)

This little shore-bird is apparently a rare fall transient along the entire eastern seaboard, and to date I have not had the fortune to see the species in life. It is said to be extremely ploverine in habits, and though occasionally occurring on the coastal mud flats it prefers the dry plains and cut-over meadows frequented by the Upland and Golden Plovers.

Griscom wrote, "In Giraud's day this western species was believed to occur almost every season on Long Island in the fall. It is now known as a rare or very rare fall transient, and the published records show that about twenty specimens have been shot." Its status remains the same, yet naturally with the passing of years the accumulation of records grows and it seems superfluous to list them.

There is but one spring record, a bird well seen at Lido Beach, Long Island, May 30, 1934 (Harrower). The large majority of Long Island records are from along the south

shore and are concentrated in September. The earliest is from Montauk, August 7, 1933 (Helmuth), and the latest from Mecox Bay, October 15, 1933 (Helmuth). The few Staten Island records are all in September. Around Newark Bay, New Jersey, the late Charles A. Urner listed this species as "a very rare migrant but recorded each fall." Here too the large majority of records are concentrated in September, with extremes August 30, 1934 (Urner), and October 9, 1932 (Edwards). I find but one report elsewhere in our region that deserves consideration, northern Westchester County, July 12, 1940 (Breslau).

Marbled Godwit

Limosa fedoa (Linnaeus)

Until the beginning of the nineteenth century this handsome shore-bird was apparently common along our shores, as Audubon mentions immense flocks passing along the coast from Florida to Massachusetts. In the middle of the century Giraud considered it regular but not abundant in May, August and September. By the time Dutcher was compiling his Long Island records it was a rare fall transient, and the last specimen known to him was shot in 1888. Griscom called it a very rare straggler and gave but five additional records, two of which were unquestionable sight identifications.

With the gratifying increase of most of our shore-birds in the last two decades, the Marbled Godwit has been showing up much more frequently, and it is now recorded on the south shore of Long Island every fall. The discovery of this species in the New York City region is, however, still a red-letter occasion, and the maximum that has been seen at one time is five. Early reports indicate that it formerly occurred in May, but I can find only one recent spring record: Jamaica Bay, Long Island, May 11, 1941 (Imhof). To-day it is a rare but regular fall transient along the south and east shores of Long

Island, and excluding the Orient peninsula I know of but one record from along the Sound: Northport, September 9 to 12, 1929 (Ingraham). Though a rare but regular fall transient along the coast of southern New Jersey, I can find no records for our portion of that state away from Newark Bay, where it is extremely rare in fall. Elsewhere in our region the bird has not been recorded.

The Marbled Godwit has been seen at Moriches Inlet, Long Island, as early as July 6 and 9, 1941 (Rose, Terry and Wilcox). The bird is, however, purely casual before the second week in August, and the large majority of records come after severe easterly gales in late August or early September. There are very few records after the end of this latter month, the latest from Oak Island Beach, Long Island, October 20, 1935 (Sedwitz). There are several November records for the New Jersey coast just to the south of us, and one bird remained around Barnegat as late as January, 1938 (Urner).

Hudsonian Godwit

Limosa haemastica (Linnaeus)

The Hudsonian Godwit or Ring-tailed Marlin seems never to have been a common bird anywhere in our region. During the first twenty years of the current century only a few stragglers were recorded, and the bird was thought to be on the verge of extinction. In late August of 1922 Walden Pell, in a letter to J. T. Nichols, reported in detail a remarkable flight on Long Island after a two day northeaster when flocks as high as sixteen were seen around Shinnecock Bay. While there have been no comparable flights since, the species has been showing up singly or in twos and threes on the south and east shores of Long Island every fall in recent years. The bird is casual in fall on the north shore of Long Island. In our section of New Jersey it is known only from around Newark Bay as a very rare fall transient. Elsewhere in our

region I know of but one record: two birds seen at Rye, Westchester County, after a cyclonic storm on September 29, 1935 (Cruickshank and Oboiko).

The Hudsonian Godwit is accidental in spring. Griscom listed no spring dates, and I find only four reliable sight identifications for this season, all from Long Island. They are: Long Beach, May 23, 1925 (Kuerzi); Jones Beach, May 22, 1932 (Vogt); Idlewild, May 25, 1934 and May 13-17, 1939 (Mayer). A bird in breeding plumage was seen around Newark Bay, New Jersey, on the remarkable date of July 3, 1925 (Urner). Southbound birds have been observed at Jones Beach, Long Island, as early as July 16, 1938 (J. Elliott), and at several points late in this month. The species is, however, extremely rare before mid-August, and most of the records come after severe easterly gales in September. The three latest records are from Long Island: Oak Island Beach, October 28, 1934 (Breslau, Carleton, Sedwitz); Moriches Inlet, October 29, 1940 (J. T. Nichols, Wilcox *et al.*); Amityville, November 6, 1934 (John Chapin).

Ruff

Philomachus pugnax (Linnaeus)

An accidental straggler from the Old World. Griscom listed three records of its occurrence on Long Island: October, 1851; May 15, 1868, and September 26, 1914, the latter bird shot near Freeport (Hendrickson).

A bird discovered but unidentified by youthful members of the Queens County Bird Club at Moriches Inlet, Long Island, September 9, 1939, was carefully studied and identified later in the day (Cadbury and Cruickshank). There is a report of one seen at Jones Beach, Long Island, September 14 and 22, 1940 (Fischer, Norse, Staloff).

Sanderling

Crocethia alba (Pallas)

No bird is more appropriately named, for one cannot think of the Sanderling without visualizing long stretches of white sand, a pounding surf and scores of little, mouse-like shore-birds rushing nimbly back and forth at the very edge of the ebb and flood of every wave. It is an abundant transient on the ocean beaches of Long Island, Staten Island and New Jersey. It occurs commonly on the extensive tidal flats of the large bays and estuaries along the coast, but it becomes rapidly less common as one leaves the proximity of the ocean. It is less common westward along both shores of the Sound and generally rare in spring and uncommon in fall west of Rye and Eaton's Neck. In recent years the species has been occurring every fall as far inland as Newark Bay but it is still casual there in spring. Excluding A. K. Fisher's remarkable statement that the species was fairly common at Ossining years ago I can find no records from the interior.

In mid-April light flights of Sanderlings arrive from the south, but it is not until the initial week in May that any widespread movement sets in. A spring peak is reached during the last half of May, and at this season one may expect to see several hundred birds in a day of vigorous birding along the outer beaches. This spring movement is virtually confined to the ocean front. Migrants are passing through up to mid-June, and a few barren birds regularly linger along the coast throughout the summer. By the opening week in July the return flight sets in. This fall movement is always heavier, more widespread and more prolonged than the spring one. Maximum abundance for the entire year is reached during the first half of August, and at this season one will occasionally see from five hundred to one thousand birds in a day along the coast. After August numbers gradually diminish. With the first killing frost in early November most of the

birds rush south and the species becomes rare. Along the coast proper small flocks regularly linger into December, and in mild seasons a few birds remain throughout the winter.

RECURVIROSTRIDAE: AVOCETS AND STILTS

Avocet

Recurvirostra americana Gmelin

According to Giraud when this beautiful shore-bird bred on the coast of southern New Jersey it was an occasional visitor to the shores of Long Island. There are two nineteenth century Long Island specimens, the last taken in 1847. The bird then went unrecorded until one appeared at Orient, August 15, 1908, and remained for a week (Latham). There have been the following Long Island records in recent years: Moriches Inlet, September 8, 1935 (Mathews, R. Peterson, Wilcox *et al.*); Jones Beach, October 20-24, 1935 (Cruickshank, Sedwitz, Vogt *et al.*); Freeport, November 6, 1935 (Cruickshank); Moriches Inlet, September 27, 1936 (Wilcox); Fire Island, one shot, October 3, 1937 (E. Hen *fide* E. Mayr); Jamaica Bay, August 19 and October 5, 1940 (Imhof, Brennan, Russell *et al.*).

Two adults and one immature were found near Newark, New Jersey, September 15, 1932 (Edwards and Urner). They remained until October 4 and were seen by a score of observers. According to an anonymous letter to Mr. Urner, these three birds were but the remnants of a flock of twelve first seen on September 4, the others having been illegally killed.

I find but one other record for our region: a bird carefully studied at Hunter's Island, Bronx County, October 7-8, 1939 (Sialis Bird Club).

Black-necked Stilt*Himantopus mexicanus* (Müller)

While this long-legged shore-bird was more common than the Avocet in southern New Jersey until the early part of the nineteenth century, it apparently straggled north less frequently, and there are only two specimens from Long Island in existence, the last taken in 1843. Griscom correctly placed it on our list of extirpated species.

PHALAROPODIDAE: PHALAROPES**Red Phalarope***Phalaropus fulicarius* (Linnaeus)

The Red Phalarope undoubtedly occurs regularly and in good numbers, both spring and fall, fifteen or more miles off our beaches, only coming near shore when forced to by violent easterly storms. The observer who sees this species anywhere in our region should consider himself fortunate, for during the average year no more than two birds are seen, and I know many active local enthusiasts who have yet to see the species in life. On Long Island it is a rare and irregular transient along the south and east shores, with most of the records concentrated at the eastern end. It is purely casual elsewhere. Excluding Long Island I can find but seven records for our region. These are: Hackensack River, New Jersey, June 27, 1863 (Abbott); Newark Bay, New Jersey, May 12, 1934, May 19, 1934, and October 4, 1936 (Urner); Staten Island, September 20, 1936 (Norse); Ossining, Westchester County, October 14, 1919 (Brandreth); Kensico, Westchester County, October 29, 30 and 31, 1933 (Herbert, Kassoy, Kuerzi *et al.*).

A Red Phalarope was collected on Shelter Island on the remarkable date of March 25, 1913 (Worthington), and another was seen in Fire Island Inlet, Long Island, as early as March 29, 1936 (Breslau). On April 29, 1937, after a severe

easterly storm large flocks of phalaropes were blown ashore and were recorded at numerous points along the south shore of Long Island. During this flight over two thousand phalaropes, seventy-five per cent of which were Reds, were seen on Shinnecock Bay (Wilcox). Over three thousand were seen at East Hampton, Long Island, on May 16, 1939 (Helmuth). The species is most often recorded in May. June records are very few and, excluding the Jersey record already listed, the latest is from Gardiner's Bay, Long Island, June 26, 1934 (Latham). The species is just as rare and irregular during the southward movement. Two birds were seen at Atlantic Beach, Long Island, as early as July 30, 1938 (Mayer). August records are few, and most of the fall dates are concentrated in September and October. The two latest records are from Long Island, Montauk, November 27, 1902 (Braislin) and Amityville, November 28, 1888 (Chichester).

Wilson's Phalarope

Steganopus tricolor Vieillot

This slender bird of the western sloughs, unlike our other two phalaropes, is not maritime. In fact it seems to prefer the edges of fresh-water pools, tidal flats and brackish marshes and is generally found zigzagging in comical gait across the shallows in pursuit of its prey. It is now a rare but regular fall transient on the south and east shores of Long Island and around Newark Bay. Excluding these two areas I find only the following few records for our region: Bronx Park and Hunts Point, Bronx County, September 21, 1924 (Bronx County Bird Club); Troy Meadows, New Jersey, May 22, 1927 (Hegeman), and May 18, 1932 (Griscom, Urner *et al.*); Secaucus, New Jersey, September 13, 1931 (Edwards, Herbert, Kassoy); Seabright, New Jersey, September 7, 1931 (F. Allan); Flushing, Long Island, August 26, 1940 (F. E. Watson and Hines).

The Wilson's Phalarope is casual in spring. I find only the four following records to add to the two already listed: Moriches, Long Island, June 1, 1887 (Lawrence), and May 29, 1911 (Wilcox); Newark, New Jersey, May 12, 1934 (Urner); Oak Island Beach, Long Island, May 21, 1936 (Cruickshank). A bird seen at Long Beach, Long Island, June 19, 1930 (Watson and Johnston), is hard to allocate. Southbound birds have arrived at Jones Beach, Long Island, as early as June 28, 1934 (Bohn and Walker), and there are several records for July. The large majority of records, however, are concentrated in late August and early September. Ordinarily but a single individual is found, yet there are a few local counts of four and one as high as six. The latest reliable record is from the East River, New York City, October 15, 1879 (Lawrence).

Northern Phalarope

Lobipes lobatus (Linnaeus)

Like the Red Phalarope this species is a common transient off shore both spring and fall, rarely coming into land except when blown in by strong gales. It occurs on land much more frequently, however, and is without question the most common member of its family in the New York City region. On the other hand it is one of our rarer shore-birds, and a record of its occurrence is always considered a lucky discovery. On Long Island it is an uncommon and irregular transient along the south and east shores, but it is surprisingly rare along the Sound and accidental in the interior. It is a very rare transient on Staten Island and along the Sound in Bronx and Westchester Counties. The few records for our portion of New Jersey come chiefly from around Newark Bay, but this is due in part to the lack of intensive birding on the coast north of Asbury Park. The species has been seen on several occasions on the Hudson River, and there is a record for Stillwater Swamp, Rockland County, August 22, 1937 (Orth), and a

record of thirty as far inland as Lake Hopatcong, New Jersey, August 14, 1929 (Godley).

The Northern Phalarope is generally rare in spring, although large flocks are occasionally blown ashore during tempestuous spells. One was found on Long Island as early as April 2 (*vide* Griscom), but the species is seldom recorded before the last week in April, and most of our spring records come in May. The latest spring record is from Montauk, Long Island, June 3, 1894 (Dutcher). In the fall the bird is much more regularly recorded on land. While ordinarily found singly, there are times after strong easterly gales when flocks are scattered along the coast and several hundred are seen in a single day. The species has been found on Long Island as early as August 5 (*vide* Griscom), but it is usually the last week of this month before the first birds are reported. The large majority of all local dates are concentrated in September. There are very few records after the middle of October, the two latest: Southold, Long Island, November 10, 1928 (Latham), and Orient, Long Island, November 12, 1930 (Latham).

STERCORARIIDAE: JAEGER

Pomarine Jaeger

Stercorarius pomarinus (Temminck)

The Jaegers are the plunderers of the sea and are ordinarily seen pursuing the smaller gulls and terns in order to rob them of their food. They are decidedly maritime, infrequently coming near enough to the coast to be precisely identified from shore, and consequently by far the best way to study them is to take a fishing boat five or more miles off shore in late August or early September. As is true of most pelagic species they follow the movements of fish, and are therefore astonishingly scarce some years and rather common in others.

The Pomarine Jaeger is an uncommon to rare fall transient along the ocean front, irregularly wandering in to lower New York Bay and the eastern half of the Sound. I find but two reliable records elsewhere: Ossining, Westchester County, October 18, 1877 (A. K. Fisher); Upper New York Bay, October 23, 1932 (Breslau and Sedwitz).

The Pomarine Jaeger is apparently very rare in spring. Griscom could find but one record for this season: Long Beach, Long Island, May 16, 1918 (Bicknell). In recent years there have been several late May and early June records at the eastern end of Long Island, and it is possible that more intensive work there and off shore might prove that the species occurs regularly each spring. The following account by Dr. Helmuth points in this direction: "On May 31, 1928 and several successive days, Jaegers were very common along the ocean beach at Southampton — both Pomarine and Parasitic, the former predominating, and in both phases of plumage. Between forty and fifty birds of both species were present on June 3." A record of a bird on Long Island as early as July 7 (*vide* Griscom) and a record of three at Southampton, Long Island, July 14, 1940 (Darrow), are unusual as the southward movement rarely starts before the opening week in August. Those infrequent days when more than a single individual is reported ordinarily come between mid-August and late September. Very few birds linger into November, and a record of two off Montauk Point, Long Island, on November 26, 1937 (Jacobson and Shainin), is exceptionally late.

Parasitic Jaeger

Stercorarius parasiticus (Linnaeus)

This is the most common Jaeger off our coast and the one that most often approaches the shore. It is a very rare spring and a fairly common but irregular fall transient along the ocean front. In fall it regularly wanders into Raritan Bay,

Lower New York Bay, Peconic Bay and the eastern half of the Sound. During flight years it occasionally occurs westward along the Sound to the East River, in Upper New York Bay and in the larger bays along the south shore of Long Island.

The spring flight is so light that it frequently goes unrecorded. It is virtually confined to the ocean, and a report of one seen as far inland as Pelham Bay, Bronx County, May 26, 1927 (L. N. Nichols), is unique. The species has been recorded at Rockaway, Long Island, as early as April 30 (Braislin). Most of our spring records are concentrated in the last half of May, and one was seen at Orient, Long Island, as late as June 9, 1917 (Latham). Southbound birds have appeared at Orient as early as July 25, 1914 (Latham), but it is ordinarily early August before any movement takes place. Maximum abundance normally comes during late August or September. Numbers vary considerably from year to year. Some years the bird practically skips our region and only three or four are recorded. If the flight is good it is not unusual to see over one dozen birds in a day. As many as seventy-three were seen off Staten Island on October 6, 1929 (L. N. Nichols). After the first killing frost in early November the bird is extremely rare, but individuals irregularly linger through the month and I find records for Rockaway Point, Long Island, December 3, 1937 (Mayer), and Montauk, Long Island, December 5, 1936 (Carleton, McKeever and Sedwitz).

Long-tailed Jaeger

Stercorarius longicaudus Vieillot

This is the rarest and most maritime of our Jaegers. Griscom wrote of this bird as follows: "Very rare fall migrant. For years an immature specimen in the Lawrence Collection labelled Long Island was the only record for New York State. On August 26, 1913 Thurston shot an immature bird off Fire Island, now in the Dwight Collection. R. C. Murphy

saw an adult with both the other Jaegers off Sandy Hook, September 7, 1918, but was unable to collect it."

I find only four convincing sight identifications from Long Island to add: a bird carefully studied off Long Beach, Long Island, August 28, 1923 (F. E. Watson); one off Jones Beach, June 8, 1934 (Mathews); one off Montauk Point, August 25, 1935 (Breslau); one over Georgica Pond, August 29, 1936 (Helmuth).

Northern Skua

Catharacta skua Brünnich

An accidental visitant from the far north. All local records are from Long Island. One was picked up dead on the beach at Amagansett, March 17, 1886 (Dutcher). One struck the Montauk Light, August 10, 1896. Its wing was sent to the Biological Survey in Washington where it was identified by Dr. A. K. Fisher. In addition I find two sight records: one seen diving hawk-like at Herring and Laughing Gulls off Montauk Point, November 11, 1937 (Arbib); one seen off Long Beach in late August of 1935 (Breslau).

LARINAE: GULLS

Glaucous Gull

Larus hyperboreus Gunnerus

This large, powerful, white-winged gull is an uncommon to rare but regular winter visitant along our coast, occurring most frequently in the largest concentrations of the ubiquitous Herring Gulls. Records are fairly evenly distributed along our tidal waters, with the largest number from the Montauk peninsula and from the garbage dumps of the metropolis. It is generally rare on Newark Bay, on the Sound and on the Hudson River north of Croton Point, and it is only casual on the lakes and reservoirs of the interior. This species has shown a decided increase since the beginning of the current

century and, while by no means common, an active field student may now expect to see the species annually. Numbers vary considerably from year to year. It is ordinarily found singly, yet during marked flights as many as six birds have been seen around a single city disposal plant.

Though there are records for every month in the year, the Glaucous Gull is essentially a winter visitant. Flights periodically arrive during the middle of October, but the species is not to be expected until mid-November and it often goes unrecorded until December. The status of the bird for any one winter is unpredictable. The majority of birds disappear during March, yet some regularly linger through April and into May and judging by the dozen reliable records for June, July and August a few non-breeding birds have apparently lingered on our coast throughout the summer.

Iceland Gull

Larus leucopterus Vieillot

Twenty years ago Griscom considered the Iceland Gull less common than the Glaucous Gull, but this is certainly not the case to-day. It is, however, still an uncommon to rare winter visitant in the New York City region, and a recording of the species continues to give local enthusiasts a great feeling of satisfaction. Its distribution throughout our region is virtually the same as that of the preceding species, but being slightly the more common of the two it has been recorded from more points along our tidal waters. It rarely occurs on the larger lakes and reservoirs near the coast. By far the best places to look for this bird are around sewer outlets, garbage disposal grounds or near wharves and boats where fish are being cleaned.

The Iceland Gull is subject to marked flights, being almost absent some winters and widely distributed in others. During the winter of 1933-34 probably twelve different birds were at

the Westchester Creek garbage dump in Bronx County (Kuerzi). The earliest reliable records are: Long Island, November 2 (*vide* Chapman) and Long Beach, Long Island, November 10, 1921 (Bicknell). The Iceland Gull is much more of a mid-winter bird than the Glaucous Gull, and the large majority of records are concentrated in January, February and early March. After March the species is always very scarce, but there are now April and May records for all major tide water localities and several early June records for Staten Island and Long Island. The only summer dates before me are: Bronx County, July 31, 1926 (Kessler and Kuerzi), and New Rochelle, Westchester County, August 18 and 22, 1941 (Bull and Rich).

Great Black-backed Gull

Larus marinus Linnaeus

As the Great Black-backed Gull increases as a breeding bird on the Maine coast it becomes a more and more conspicuous winter visitant in our region, and it can now be expected in season on all the larger bodies of saline water, occasionally even wandering up the narrow creeks to the extreme reaches of the tide. It is unknown over the larger part of the interior, although it unquestionably passes over unnoticed as there are numerous records from such places as the Jersey City Reservoir near Boonton, the Kensico, Croton and Jerome Reservoirs in Bronx and Westchester Counties, and the Hempstead Reservoir on Long Island. Ordinarily, even during mid-winter, one cannot expect to find over four individuals in a day's walk along the Hudson, over twelve in a day's walk along the Sound, and over thirty in a day's walk along the best sections of the ocean front, but during severe winters higher counts are not unusual. At times large concentrations occur along the outer beaches, and over two hundred Black-backed Gulls are seen blackening the spits and bars.

A few Black-backed Gulls occasionally arrive from the north in late August or early September, but it is usually not until the first heavy frost in early October that the southward movement sets in. Numbers steadily increase as the autumn progresses, and by Christmas the normal winter population is reached. The highest counts come in January, February and March, with peaks apparently dependent on the severity of the weather. With the coming of April the large majority of Coffin-backs leave for their breeding grounds, but stragglers regularly linger on the outer beaches through May, and in recent years more and more individuals, mostly immatures, have been remaining throughout the summer. During the past two breeding seasons adult Black-backed Gulls seen in the colony of Herring Gulls on Cartwright Island have excitedly scolded intruders. While no nest or young has been found, there is every reason to suspect that the species has bred.

Lesser Black-backed Gull

Larus fuscus subspecies

An accidental visitor from Europe, the first record for the United States being a sight identification just south of our borders at Beach Haven, New Jersey, September 9, 1934 (Edwards and Urner). Since no specimens have been collected it is impossible to state unequivocally which subspecies has occurred. John and Richard Kuerzi reported their bird as *graellsii*, but all other discoveries have been listed as *fuscus*. The reports are as follows: Westchester Creek, Bronx County, December 9, 1934 (J. and R. Kuerzi); Newark Bay, New Jersey, February 7, 1937 (Urner); Jones Beach, Long Island, October 30, 1939, and January 13, 1940 (J. Elliott); Westhampton Beach, Long Island, August 30, 1940 (Raynor); Heckscher Park, Long Island, February 22, 1940 (A. and H. Cruickshank).

Herring Gull

Larus argentatus smithsonianus Coues

This is by far the most abundant winter gull along our coast and the one that is ubiquitous on all tidal waters from mid-October to late April. Due to the numerous sewers and garbage disposal grounds around New York City, the Herring Gull is far more abundant here than elsewhere. It is a common visitant to all the larger lakes and reservoirs near the coast, even occurring in large numbers in Central Park and as far inland as Boonton, New Jersey. It occurs regularly as far inland as Lake Hopatcong, New Jersey, and is intermittently seen flying high overhead in all sections of the interior. Excluding the interior of Long Island, where a few are regularly seen flying over in summer, it is a very uncommon bird at this season away from the larger bodies of salt water.

Migrants, the large majority immature, regularly arrive along our coast in late August. As the species becomes increasingly common in September, many filter back from the coast and reappear on the larger lakes and reservoirs of the interior. Adults are progressively more numerous as the autumn passes, and by the peak of abundance for the entire year around Christmas they constitute over half of our Herring Gull population. All too frequently one hears reports of one hundred thousand Herring Gulls in one locality, but such estimates are certainly exaggerations as careful surveys in December within New York City have shown but twenty to thirty thousand to be the maximum present in that entire area. In April the Herring Gulls rapidly thin out, the species becomes scarce away from the coast and at the same time flights are seen moving eastward over the ocean. After May relatively few birds, the majority immatures, remain to pass the summer. With the increasing number of adults summering off eastern Long Island, it became increasingly probable that the species would nest. In 1933 LeRoy Wilcox established the first breeding record for our region when he found



a small colony on Fisher's Island. In 1936 John Helmuth found over one dozen pairs nesting on Cartwright Island, and in 1940 Wilcox discovered eleven nests as far west as Fire Island Inlet, the southernmost record for the United States. By 1941 there were six breeding stations in our region with an estimated population of over one thousand pairs, and there is no apparent reason why the increase should not continue. The nest is placed on the ground. There is but one brood, local egg dates ranging from May 7 to June 22.

Kumlien's Gull

(*Larus leucopterus* Vieillot ×

Larus argentatus thayeri Brooks) Brewster

A rare winter visitant. Griscom knew of but one definite record, an immature shot five miles off Rockaway, Long Island, March 8, 1898 (Braislin), and gave the one sight record by him at Jones Beach, Long Island, May 28, 1922, as "probably but not positively this species." Recent records, all but one, sight identifications, are as follows:

LONG ISLAND: Jones Beach, December 16, 1934 (R. Peterson and Vogt); June 12, 1936 (Mayer); July 16-18, 1936 (J. Elliott); August 2, 1936 (captured by Herbert, Hickey, Kassoy *et al.*); King's Point, January 16, 1935 (Mathews); Northport, March 26, 1937 (Woodmere Academy Bird Club); Rockaway Point, February 22, 1938 (Mayer); Jamaica Bay, April 16, 1939 (Imhof); Montauk, January 1, 1940 (J. Elliott); Flushing, February 25, 1940 (Bull and Watson); Moriches, April 22, 1940 (Breslau and Sedwitz); The Narrows, March 15, 1941 (Bull and Poor); Long Beach, June 15, 1941 (Allyn and Sedwitz).

NEW YORK STATE: Central Park, March 9, 1927 (J. T. Nichols and F. E. Watson); Eastchester Bay, February 21, 1928 (L. N. Nichols); Baxter Creek, December 16, 1933 (Kuerzi), and February 12, 1935 (Cruikshank); Upper New York Bay, January 2, 1935 (R. Allen and R. Peterson); Bronx Region, April 12 (*vide* Chapman).

NEW JERSEY: Newark Bay, February 5, 1928 (Urner), and December 23, 1929 (Carter and Urner).

Ring-billed Gull*Larus delawarensis* Ord

The Ring-billed Gull unquestionably has the distinction of being one of the most frequently misidentified birds in our region. For some reason inexperienced observers have difficulty in separating this species from the ubiquitous Herring Gull and still believe in the old contention that any immature gull with a ring on the bill and a band on the tail must be *delawarensis*. Reliable records indicate that the Ring-billed Gull has shown a definite increase during the last twenty years, and at present while not by any means as abundant as the Herring Gull it is a fairly common transient. Along the ocean, on the larger bays and on Long Island Sound it is a common transient visitant both spring and fall, an uncommon and very local winter resident, and a very uncommon but steadily increasing non-breeding summer resident. Elsewhere on our tidal waters, while fairly common as a transient, it is still a decidedly rare bird in winter and very unusual in summer. On the larger lakes, rivers and reservoirs of the interior it is fairly regular during migrations but purely casual at other seasons.

Though small flocks of Ring-billed Gulls sometimes arrive as early as the third week in August, it is ordinarily the first week in September before any appreciable movement takes place. Numbers gradually build up to maximum abundance in late November when three to five hundred, rarely one thousand, birds have been recorded in the best Ring-billed localities along the south shore of Long Island and in Raritan and Newark Bays. With the arrival of severe weather in December the species virtually disappears from the Hudson River and inland localities. In recent years it has been locally not uncommon along the coast. With the first sustained thaw in late February or early March a light return movement sets in, the bird becomes fairly common along the coast, and a

few wander up the Hudson and filter in to the larger lakes and reservoirs of the interior. During April our Ring-billed Gull population quickly thins out, and most adults have disappeared by the end of May. Each year, however, small flocks of chiefly immature birds remain along the coast as non-breeding summer residents.

Black-headed Gull

Larus ridibundus ridibundus Linnaeus

An accidental visitant from the Old World, not recorded in the United States until 1930. There are two local sight records by experienced observers: Georgica Pond, Long Island, October 11, 1938 (Helmuth); Brooklyn, April 1, 1940 (Mathews).

Laughing Gull

Larus atricilla Linnaeus

This handsome gull has shown a phenomenal increase during the last two decades. Nothing could emphasize this fact more clearly than the statement that as recently as twenty years ago Griscom could list but two records for Englewood and only one for Bronx and Westchester Counties. To-day the Laughing Gull is an abundant migrant in both of these areas. Once a common summer resident and an abundant migrant on Long Island, it rapidly decreased due to persecution for the millinery trade, and since 1888 it has not been known to nest. By the early part of this century it was a rare spring transient, but immature birds were noted each July, August and September. With the cessation of shooting the species commenced a remarkable comeback. "The fall of 1921 witnessed a great flight of these beautiful birds. For the first time in the memory of the present generation it was common in the harbor and the lower Hudson, a familiar sight from ferries and piers, and wandered up the river as far as Dyckman Street" (Griscom). The Laughing Gull continues

its climb, but to date it has not nested again in our region even though there are large colonies less than fifty miles to the south of us and many large colonies to the north of us.

At present the Laughing Gull is a fairly common spring and an abundant fall transient on all of our tidal waters, but strangely enough it is our only regular gull that is much more common on Long Island Sound, on the Hudson River and in New York Bay than it is on the south shore of Long Island. In fact it is often astonishingly uncommon in spring in this latter locality. Inland it is a fairly common transient on the larger rivers, lakes, and reservoirs and has intermittently been recorded flying over all sections but extreme northwestern New Jersey.

A Laughing Gull was collected at Speonk, Long Island, as early as March 22, 1932 (Wilcox), and there are now several records for the closing days of this month and early April. The species ordinarily arrives in a marked wave during the third week in April, and the spring peak is not reached until early May. The northward migration is extremely light compared with the southward movement, and at this season the species is only irregularly recorded west of the Hudson River and Newark Bay. By the opening week of June all but a few non-breeding birds have left our region, but over one hundred individuals in varied plumage have lingered throughout the summer around such places as the Piermont marshes, and concentrations of over one thousand, mostly immatures, have been seen along the Sound in late June and early July. By the tenth of July an influx becomes noticeable, but these early birds undoubtedly represent post-nuptial wanderings from the southern colonies. August is the month for southward migration to get under way. Numbers rapidly swell until September when this species is at maximum abundance for the entire year and it is our most numerous and widely distributed gull. At this time hundreds can be seen from most of our ferries, and concentrations of over one thousand may

be expected off Staten Island and along the Sound. Until recently the normal period of departure was in late October. In recent years, however, a few aberrant individuals along the coast have been lingering through November, and in mild seasons a few have remained until the middle of January.

Franklin's Gull

Larus pipixcan Wagler

This western species has never been collected in our region but it has been collected in Massachusetts and New Brunswick. It is a relatively easy bird to identify, and a report of one carefully studied at Long Beach, Long Island, September 25, 1938 (Allyn, Breslau, Carleton, Jacobson, Sedwitz *et al.*) is undoubtedly correct.

Bonaparte's Gull

Larus philadelphia (Ord)

In our region this dainty tern-like gull is principally a bird of extensive bodies of salt water, showing little partiality towards the ocean, Long Island Sound or the larger bays. Its movements are decidedly irregular, but on the forementioned bodies of water it is generally common to locally abundant during migrations, uncommon in winter and extremely rare in summer. It occurs fairly regularly as far inland as the tide penetrates, but away from the more extensive saline waters near the coast it is uncommon even during migrations and casual at any other season. On the larger lakes and reservoirs near the coast the bird is rare in fall and fortuitous in spring. There are very few records for as far inland as Lake Parsippany and the Jersey City Reservoir at Boonton.

From time to time small flocks of Bonaparte's Gulls appear in our region in late August or September, but the species seldom arrives before the first heavy frost in early October, and it is never here in numbers until the middle of November. Its periods of arrival, departure and abundance are so



irregular from year to year and often so contradictory from locality to locality that it is risky to make any generalizations. Thousands may be recorded in a day in a few localities, and yet the species may go virtually unrecorded over the larger part of our region. In most sections the Bonaparte's Gull is very uncommon to rare in winter, but at this season remarkable concentrations will occasionally show up off Montauk Point, on the Sound, along the south shore of Long Island and off the coast of New Jersey. By mid-March the return flight sets in, and the birds appear in their showy nuptial plumage. During April and early May three of the best places to see the species are New York Harbor, Raritan Bay and off Staten Island. On the larger part of our coast the spring movement is generally light and abrupt while inland it is virtually absent. After the first week in May the species rapidly disappears, yet small flocks regularly linger until the end of the month and there is a sprinkling of records of immature birds along the coast for every week throughout the summer.

Little Gull

Larus minutus Pallas

There are two old records for this small European Gull from Long Island: one collected on Fire Island, September 15, 1887 (Powell); the other collected at Rockaway, May 10, 1902 (Peavey). For the next twenty-seven years the species went unrecorded in our region. Then one was discovered in Upper New York Bay on May 6, 1929, by Dr. James Chapin and it was subsequently seen by numerous observers. Since then the Little Gull has been recorded from both Upper and Lower New York Bays almost annually, and there are now over sixty reports from these waters. The spring dates are concentrated in late April and early May, with extremes from Brooklyn, April 1, 1940 (Mathews), and Oakwood Beach, Staten Island, May 22, 1934 (Kuerzi). There are only half as many fall dates as spring ones, the earliest from Crooke's Point, Staten Island,

July 27, 1933 (Dr. Chapin), the latest from Oakwood Beach, Staten Island, August 27, 1933 (Dr. Chapin). No more than two individuals have been seen at one time. Elsewhere in our region the Little Gull is still purely casual. One was seen in Newark Bay, New Jersey, May 12 and 14, 1929 (Edwards, Eaton, Urner); another at East Hampton, Long Island, January 2 and 3, 1930 (Helmuth).

Ivory Gull

Pagophila alba (Gunnerus)

An accidental visitant from the Arctic. One was collected in Great South Bay near Sayville, Long Island, January 5, 1893 (Goldsworth). One was reported as seen flying around Mt. Sinai harbor, Long Island, years ago (A. Helme), and another was carefully studied on Gardiner's Bay, Long Island, February 21, 1934 (Latham).

Atlantic Kittiwake

Rissa tridactyla tridactyla (Linnaeus)

The Kittiwake is the most maritime of our gulls and is purely casual away from the ocean. By far the best way to see the species is to take a fishing vessel ten or more miles off shore in winter. There it often outnumbers all other gulls and is sometimes actually abundant. Over five hundred have been seen on days when the fishing was excellent. From the shore, Montauk Point is the most promising place to look for this species, but even there one cannot expect to see Kittiwakes on every winter trip. Periodically several hundred are seen milling over the ocean, but four or five are certainly a more normal maximum. Along the entire south shore of Long Island and along the New Jersey coast the Kittiwake is a rare, irregular winter visitant. Away from the ocean even on Long Island Sound it is indeed a rarity and is usually recorded only after severe easterly gales. After such blows I have seen individuals on Great South Bay, on the Sound and even on a

fresh-water pond near Babylon. Away from the coast and the eastern half of Long Island Sound I find very few records. There are four records from the eastern shores of Bronx and Westchester Counties (Bronx County Bird Club), one from Oyster Bay, Long Island, November 28, 1928 (Mathews), one off Hudson County, New Jersey, May 4, 1932 (Urner), and one from Prospect Park, Brooklyn, March 13, 1918 (Victor).

The Kittiwake has been seen at Moriches Inlet, Long Island, as early as September 20, 1936 (Breslau and Sedwitz), and at Montauk Point, Long Island, on October 5, 1936 (Helmuth), but such dates are very unusual as the species rarely arrives until the first killing frost in early November. Lack of sufficient pelagic trips by local observers makes it impossible to give details as to the periods of maximum abundance off shore. The records from along the coast are so correlated with stormy weather that dates are of limited significance. Most of them, however, are concentrated in December, January and February. After March the species is accidental, but years of intensive birding have given us several April and May dates, one from Mecox Bay, Long Island, as late as May 23, 1937 (Helmuth). A bird seen off Montauk Point, Long Island, August 14, 1926 (Baker), is our only summer record.

Sabine's Gull

Xema sabini (Sabine)

An accidental visitant from the Arctic. One was shot at Raynor South, Long Island, in July, 1837 (Giraud), and another was collected in Gardiner's Bay, Long Island, October 6, 1899 (Worthington).

In addition I find the following recent sight identifications from Long Island, all by experienced observers and undoubtedly correct: Dyker Heights, October 14, 1926 (Johnston and Watson); Mecox Bay, October 17, 18 and 20, 1936 (Helmuth); East Hampton, October 10, 1938 (Helmuth); Moriches Inlet,

September 24, 1940 (Terry). I know of several other sight identifications but they are unsatisfactory and are not listed.

STERNINAE: TERNS

Gull-billed Tern

Gelochelidon nilotica aranea (Wilson)

The Gull-billed Tern has apparently never been regular in our region. Even early in the eighteen hundreds, when it bred as far north as southern New Jersey, both DeKay and Giraud regarded it as a rare visitor to the coast of Long Island. By the middle of the century it had become rare in New Jersey and last nested there in 1890. Griscom could find but four definite records for our region, one early June and three early July dates, all from the south shore of Long Island and all between 1882 and 1885, and he therefore placed the species on the list of the extirpated.

At present the northernmost breeding colony is on the coast of Virginia. I find the following recent reliable sight records for Long Island: Jones Beach, September 9, 1934 (Mathews); Sagaponack, September 16, 1934 (Carleton, Helmuth, Sedwitz *et al.*); Atlantic Beach, August 12, 1937 (Kraslow); Mecox Bay, September 17, 1934 (Helmuth); Moriches Inlet, August 26, 1937 (Fry); Idlewild, August 18, 1938 (Mayer). One was carefully identified at Oakwood Beach, Staten Island, August 4, 1934 (Cruickshank), and there is a report of two killed hitting the Ellis Island Light in late August, 1913 (*vide* Kohler).

Trudeau's Tern

Sterna trudeaui Audubon

A South American species that was once taken at Egg Harbor, New Jersey. Eaton includes it on his list of New York State birds on the strength of Audubon's statement: "I have received from Mr. Trudeau an intimation of the occurrence of several individuals on Long Island." The evidence is, how-

ever, very inconclusive and as Griscom has wisely stated the species has even less claim to a place on our local list than the Cabot's Tern.

Forster's Tern

Sterna forsteri Nuttall

Griscom writing in 1923 summarized the status of the Forster's Tern as follows: "Formerly a rare visitor to Long Island; five records, September 3 to October 1; none in the last forty years." I am delighted to be able to say that this is another species that has staged a remarkable comeback from the ranks of the extirpated. The fall of 1925 brought a large invasion, and the bird was seen on almost all of our extensive saline waters. Since then it has been recorded along the coast each fall, although its numbers fluctuate considerably from year to year.

At present the Forster's Tern is casual in spring, and I know of but two reliable records for this season: Jones Beach, Long Island, April 6, 1940 (Allyn and Whitman); Moriches Inlet, Long Island, June 9, 1932 (Wilcox). It is an uncommon but regular fall transient all around the periphery of Long Island, on most of the saline waters touching the five boroughs of New York City, along the eastern shores of Westchester County, on the New Jersey coast and in Raritan and Newark Bays. It is irregularly recorded up the Hudson as far as Englewood and occasionally as far as Croton Point. The only records I find for fresh-water localities are from the lakes and reservoirs of Long Island.

The Forster's Tern has been seen at Jones Beach, Long Island, as early as July 10, 1932 (Vogt), and in several localities within the next ten days, but it is usually the last week in July before the first birds arrive and always August before the species is here in numbers. It is ordinarily discovered singly or in small flocks but in the best Forster's Tern years large flights often come in September. During this month over three

hundred birds have been seen in a day on the south shore of Long Island, in the Harbor and in Newark Bay. During October numbers rapidly drop off. Away from the coast the species is a rarity after the middle of October, and ninety per cent of all November dates are from the ocean front. There is a record for Jones Beach, Long Island, November 17, 1933 (A. O. U. Field Trip), and another for Manhattan Beach, Long Island, December 26, 1924 (Hix and Nathan).

Common Tern

Sterna hirundo hirundo Linnaeus

In the early part of the nineteenth century the Common Tern was an abundant summer resident on Long Island. The ruthless slaughter for the millinery trade was, however, too much for the species and it rapidly disappeared. By 1884 the last breeding colony on the south shore had gone, and on the western half of the Island the Common Tern became very rare in spring and uncommon though regular in fall. As soon as protection was given, a gratifying increase began. At present there are fifteen breeding colonies along the south and east shores of Long Island, only four west of Patchogue. Unfortunately it is now decreasing as a summer resident around the Orient peninsula, the colony at Orient Point having dropped from a maximum of six thousand pairs in 1930 to one hundred and twenty-five pairs in 1940. The species is now a common transient both spring and fall on most of the tidal waters of Long Island. Elsewhere in our portion of New York State it is an uncommon spring and a common fall transient as far as salt water penetrates. It becomes progressively less common away from the coast and is very irregularly recorded in the interior. There are, however, many records for the lakes and reservoirs of Long Island and quite a few for the lakes and reservoirs in Bronx and Westchester Counties. The bird breeds along the New Jersey coast just to the south of us, but in our portion of that state it is known only as a common

transient along the coast, a less common transient inland as far as the tide penetrates and a rare transient on the rivers, lakes and reservoirs of the interior. Four birds were seen as far inland as Bernardsville, May 20, 1930 (Kuser).

Six Common Terns seen on the Raritan River, New Jersey, March 20, 1938 (Cant and Eynon), and undoubtedly the same group seen off Staten Island, March 23, 1938 (Fables), are probably not early migrants but, more likely, birds that wintered just south of us with the Bonaparte's Gulls with which they were associating. In fact very few Common Terns reach our region before the middle of April, and it is not until the initial week in May that any widespread movement takes place. This spring flight is often unrecorded away from the coast. As soon as the birds arrive the majority head for their breeding grounds and begin their enthusiastic pairing ceremonies. The birds nest in colonies, placing their eggs on the sand or in a crude grass nest. There is but one brood, local egg dates concentrated in late May and early June, with extremes May 12 and August 4. By the first week in July Common Terns become conspicuous in New York harbor. As numbers increase more and more birds wander up the Hudson and trickle into the small saline creeks. The last half of August brings maximum abundance, and at this season over seventy have been seen in a day even on Newark Bay and on the Hudson north of the George Washington Bridge. On the coast concentrations of five thousand or more are occasionally recorded. During September the population in most areas rapidly dwindles, and by the end of the month the bird is a rarity away from the coast. On the ocean proper there are often large flights until the middle of October. After the first killing frost in early November the Common Tern is casual, yet aberrant individuals have been seen at Orient, Long Island, November 26, 1929 (Latham), and off Rockaway Point, Long Island, as late as December 4, 1937 (Jacobson, Kraslow *et al.*).

Arctic Tern*Sterna paradisaea* Brünnich

A casual visitor to the south shore of Long Island. There is only one collected specimen, a bird taken at Ram Island Shoals, July 1, 1884 (Dutcher).

With the extension of the bird's breeding range southward along the New England coast it has become a bit more regular in our region. There are now seventeen recent records of typical adult birds seen by experienced observers. These records are sprinkled along the south shore of Long Island from Dyker Heights to Montauk Point. The large majority of them fall between mid-August and mid-September and all but three are in these two months. The earliest sight record is from Jones Beach, July 19, 1933 (Vogt), the latest from Long Beach, October 9, 1937 (Cruickshank).

Roseate Tern*Sterna dougalli dougalli* Montagu

Ten years ago some four hundred pairs of Roseate Terns nested at Orient Point, but this colony has been nearly wiped out and the total population at the eastern end of Long Island is now less than one hundred and fifty pairs. The colonies at Orient Point, Ram Island, Cartwright Island and Gardiner's Island are the only ones within our boundaries. Around the larger part of the periphery of Long Island the species is rare in spring, uncommon in fall and purely casual in summer. It is decidedly uncommon on the Sound west of Sunken Meadow and along the South Shore west of Moriches Inlet, and in some years it virtually goes unrecorded in both these areas. Elsewhere in our portion of New York State the Roseate Tern is an exceedingly rare bird. There are less than two dozen August and September records for Staten Island and the harbor and only one record for Bronx County: Baxter Inlet, August 25, 1934 (Cruickshank). A few pairs nest on the

New Jersey coast to the south of us, but on our section of the coast the bird is an astonishingly uncommon transient, and I know of only one reliable record for as far inland as Newark Bay: September 21, 1924 (Urner).

The Roseate Tern has been seen at Orient Point, Long Island, as early as May 20, 1915 (Latham), and most of the summer residents are on their breeding grounds before the second week in June. Away from breeding localities the species is surprisingly rare in spring and is purely casual in summer. The nest is either a scoop in the sand or a shallow saucer of grasses. There is but one brood, local egg dates concentrated in the first half of June, with extremes May 28 and July 6. As soon as the first young can fly in late June the birds commence to wander. Fall migration definitely sets in by mid-July and reaches a peak in late August. There is considerable variation in numbers from year to year. In most areas even along the ocean front one considers oneself lucky to see from one to six Roseate Terns on any one day, but from time to time concentrations of over one hundred are recorded. After the end of September the species is fortuitous, and the latest record is from Atlantic Beach, Long Island, October 9, 1937 (Cruickshank).

Sooty Tern

Sterna fuscata fuscata Linnaeus

This tropical species is of accidental occurrence in our region. There are two old specimens taken on Long Island: Lake Ronkonkoma, September 13, 1878 (Dutcher); Montauk, September 18, 1883 (Worthington).

A decided invasion occurred in the fall of 1928 after a wild storm of tropical origin. A specimen was picked up dead at Oakwood Beach, Staten Island, September 23 (R. Peterson and Muller). This storm produced the following records for the south shore of Long Island: two dead, Moriches, September 21 (Wilcox); three flying over Mecox Bay, September 23,

and one found dead at Georgica Pond, October 1 (Helmuth); two, much decomposed, Shinnecock Bay, December 24 (Wilcox); one in the same condition, Montauk Point, January 20, 1929 (Kassoy, Kuerzi, R. Peterson).

Since then there have been four additional records: one picked up in good condition on Shelter Island, October 7, 1929 (Latham); the skeleton of one found in Shinnecock Bay, Long Island, February 21, 1930 (Wilcox); one seen flying around New York harbor, August 14, 1931 (Kassoy); one seen at Manorville, Long Island, during the hurricane on September 21, 1938 (Raynor).

Least Tern

Sterna antillarum antillarum (Lesson)

This small, dainty tern received terrible punishment during the days when it was prized by the millinery trade. Formerly a common summer resident on Long Island it was rapidly reduced to the verge of extinction and was not known to nest during the thirty-four years between 1882 and 1926. Protection was afforded just in time and during the last two decades there has been a gradual but definite increase. At present there are over three hundred pairs in six breeding colonies on Long Island, all along the south shore west of Westhampton Beach. Elsewhere along the south and east shores of Long Island the Least Tern is an uncommon spring and a fairly common fall transient. It is gradually increasing as a summer visitant everywhere along the south and east shores of Long Island, and it will undoubtedly soon establish itself as a breeding bird in many new localities. On the Sound west of the Orient peninsula the Least Tern is still a very rare bird, and there are only a half dozen records west of Eaton's Neck. Around Staten Island and in New York harbor the bird is very rare in May and early June, and uncommon but regular from mid-July to early September. The species breeds fairly commonly on the New Jersey coast to the south of us, but

along our section of the New Jersey coast it is known only as a fairly common transient and summer visitant. It is casual in Newark Bay and unknown from the interior.

The Least Tern has been seen at Jones Beach, Long Island, as early as April 20, 1938 (Cruickshank), but it is ordinarily the initial week in May before the first flight arrives. As with most terns the birds immediately go to their breeding grounds. In spring, therefore, the species is generally uncommon in localities where it does not breed. The birds nest in colonies on the open sand. There is but one brood, local egg dates concentrated in the last half of May and the first week in June, with extremes May 10 and July 25. By the second week in July the Least Terns are again on the move, and by mid-August the species is at maximum abundance. During August it is not unusual to see over two hundred in a day in the outer bays. The period of maximum abundance naturally produces most of our records for points where the bird is unusual. By the middle of September the Least Tern has ordinarily disappeared, yet in the last few years aberrant individuals have lingered into October, and I find a report of one seen in Jamaica Bay, Long Island, on the remarkable date of November 5, 1940 (Imhof).

Royal Tern

Thalasseus maximus maximus (Boddaert)

An accidental visitant from the south. A specimen was taken at Raynor South, Long Island, August 27, 1831 (Ward).

Cabot's Tern

Thalasseus sandvicensis acuflavida (Cabot)

"There is no valid reason for giving this species a place among the birds of New York State. DeKay states that it 'has been little noticed on our coast,' and Eaton cites a record of Lawrence in his catalogue of 1886, but there is some mistake, as the species is not mentioned. Giraud, who knew the birds



of Long Island better than DeKay, does not mention it" (Griscom).

American Caspian Tern

Hydroprogne caspia imperator (Coues)

Until the third quarter of the nineteenth century the Caspian Tern apparently occurred regularly on our coast in the late summer and early autumn. It disappeared, however, during the days of tern persecution, and Griscom could find but three reports of birds seen locally after 1900. During the last fifteen years it has increased to the point where it is now a rare spring and an uncommon but regular fall transient along our coast. On Long Island where the bird is most regularly found it occurs most frequently along the south and east shores and is rare even on the eastern half of the Sound. Though a regular transient along the New Jersey coast to the south of us there are surprisingly few records for our portion of that state. A few birds occur annually on the waters around Staten Island, and a very few irregularly wander westward on the Sound as far as Nassau, Queens, Bronx and Westchester Counties. Elsewhere I find only the following records: Newark Bay, New Jersey, May 20, 1928 (Edwards); Jerome Reservoir, Bronx County, September 30, 1934 (Cruickshank); Greenwood Lake, New Jersey, October 6, 1935 (Edwards); Piermont, Rockland County, August 29, 1936 (Deed); Boonton, New Jersey, April 22, 1939 (Stearns); Lake Kemah, Sussex County, New Jersey, June 2, 1940 (Brown, Edwards, Eynon).

The Caspian Tern is generally very rare in spring, and the highest day's count I can find for this season is five. The earliest record for our region is the one already listed for Boonton, New Jersey, April 22, 1939 (Stearns). Most of the records are grouped in May, and one was seen at Moriches Inlet, Long Island, as late as June 25, 1937 (Wilcox). One bird, apparently southbound, was recorded in Great South Bay, Long Island, as early as July 21, 1900 (Braislin). The fall mi-

gration rarely starts before August, however, and the species often goes unrecorded until September. This latter month produces about seventy per cent of all local records, and at this time three or four are periodically seen in a day and on rare occasions as many as fourteen. There are very few records for the Caspian Tern after the end of September; the latest is from Jones Beach, Long Island, October 24, 1936 (Mayer). There is, however, an extraordinary report of one carefully studied on the Prospect Park Lake, Brooklyn, on the astounding date of March 3, 1940 (Fleischer, Brennan, Tengwall).

Black Tern

Chilidonias nigra surinamensis (Gmelin)

It is an interesting fact that this beautiful little tern from the interior is in our region most common on saline waters. It occurs as a regular fall transient as far as the tide penetrates, but it is progressively less common as one works away from the larger bodies of salt water. On most of our fresh water it is irregular and in many places astonishingly rare, but there are now records for the majority of large lakes, rivers and reservoirs throughout the interior. Until recently the Black Tern was of casual occurrence anywhere in our region in spring, and Griscom gave but three records for this season. It is still very rare at this time of the year and is seldom seen in flocks of more than six, but a few birds now occur every spring and there are far too many records to list.

A Black Tern was seen on the Jersey City Reservoir at Boonton, New Jersey, as early as April 22, 1933 (Edwards), but the majority of spring dates fall in May, and there are only eleven records for the first half of June. The bird is purely casual in summer as indicated by the light sprinkling of dates from mid-June to mid-July. By the third week in July the fall migration commences, and the species appears on all of the larger bodies of salt water. From the second week in August to mid-September the Black Tern is at its peak of

abundance for the entire year, and periodically flocks of up to five hundred, rarely as many as two thousand, may be seen. At this season a ride across Upper New York Bay on the Staten Island Ferry will give a student marvelous opportunities to study the species. With the first light frost in late September most of our Black Terns rush south, and the latest record is from Dyker Heights, Brooklyn, October 27, 1927 (Johnston).

RHYNCHOPIDAE: SKIMMERS

Black Skimmer

Rhynchops nigra nigra Linnaeus

Until the middle of the nineteenth century when the Black Skimmer bred commonly in southern New Jersey it was an occasional summer visitant to Long Island. Eaton gave five records of the bird's occurrence in our region, the last in 1898. For the next twenty-five years there were but two records, and Griscom naturally called it a casual visitant. Since 1924 the species has been steadily increasing. One of the local ornithological highlights of 1934 was the discovery of the Black Skimmer nesting on Gilgo Island in Great South Bay, Long Island (Herholdt and Vogt). There are now three nesting colonies along the south shore of Long Island with a total population of at least forty pairs, and there is every reason to believe that the breeding birds will increase and spread. Excluding those waters around Gilgo Island, Oak Island Beach and Moriches Inlet where breeding colonies now exist, the Black Skimmer is known only as a very rare spring transient and an uncommon but regular late summer visitant along the south shore of Long Island. It is much rarer on the eastern shores of the Island and purely casual along the north shore as far west as Glen Cove. There are breeding colonies on the New Jersey coast just to the south of us. Due to lack of intensive field work north of Asbury Park, however, we have very few records for our section of that coast. There are



now seven late summer records for the waters around Staten Island. Elsewhere I find only the following few records: Hunt's Point, Bronx County, September 14, 1924 (Kuerzi); New Rochelle, Westchester County, July 17, 1926 (Rich); Hudson River between Riverdale and Englewood, September 3, 1934 (Cruickshank); Newark Bay, New Jersey, August 29, 1928 (Urner), and October 30, 1937 (Edwards and Street).

The Black Skimmer has arrived at Moriches Inlet, Long Island, as early as April 30, 1936 (Cruickshank), but it is ordinarily not until the third week in May that the species may be expected. Spring records are scarce away from the breeding grounds. The nest is a mere scoop in the sand. There is but one brood, local egg dates concentrated in July, with extremes June 11 and August 23. Around the middle of July there is often a noticeable influx of Black Skimmers, and the species is recorded at numerous points along the south shore of Long Island. This movement evidently represents post-nuptial wanderings from the south and is subject to large variations from year to year. Ordinarily one feels grateful for seeing one or two of these unique birds in our region, but sometimes after strong September gales flights occur and concentrations of over two hundred birds have been seen. The Black Skimmer is exceedingly rare after September anywhere in our region but a few irregularly linger through October and in 1938 thirty remained at Eastport, Long Island, to November 13, and four were seen there as late as November 24 (Wilcox).

ALCIDAE: AUKS, MURRES AND PUFFINS

Great Auk

Plautus impennis (Linnaeus)

"Singleton Mitchell in a 'Partial Catalogue of the Birds of New York,' made at Plandome, Long Island, and dated July 5, 1803, reports the 'Penguin' in his list of 123 species, a name

by which the Great Auk was generally known in colonial times. The existence of this excessively rare pamphlet was unknown to previous writers on New York State birds. The author was not a scientist, however, only English names were given, some of which are not positively identifiable; and there are no remarks or annotations of any kind. This report, therefore, cannot be regarded as definitely establishing the former occurrence of the Great Auk on Long Island, though this is quite possible or even probable" (Griscom).

Razor-billed Auk

Alca torda Linnaeus

The Razor-billed Auk is an uncommon but regular winter visitant to Montauk Point. Elsewhere along the south and east shores of Long Island and on the New Jersey coast it is a very rare and irregular winter visitant, although it undoubtedly occurs frequently off shore every winter. There are now scores of records from numerous points along our coast, and a listing of such places and dates would be superfluous. I know of no records for the north shore of Long Island west of the Orient peninsula. Elsewhere the Razor-billed Auk is purely casual, and I can find only the few following records: two seen on the Hudson River from the Jersey City Ferry, December 5, 1926 (Urner); Manursing Island, Westchester County, December 11, 1927 (Kassoy and Kuerzi); Eastchester Bay, Bronx County, November 6, 1938 (Kramer).

The Razor-billed Auk has occurred at Rockaway, Long Island, as early as November 2 (Braislin), and at Montauk Point, Long Island, on November 12, 1933 (Breslau, Cruickshank, Sedwitz), but the species is seldom recorded before the end of this month and often goes unrecorded until Christmas. Most of our records are concentrated in late December, January and February. Montauk Point is the only place where an observer can feel reasonably certain of seeing this species, yet even there several trips are usually required. One con-

siders oneself fortunate to see one of these northern birds anywhere in our region, but periodically after severe easterly gales many are blown near shore and as many as eighty were seen from Montauk Point on January 3, 1932 (Walsh). After mid-March the species is extremely rare, but individuals occasionally linger into April, and one was seen on Long Island as late as May 18 (*vide* Chapman).

Atlantic Murre

Uria aalge aalge (Pontoppidan)

An extremely rare winter visitant to Long Island. One was picked up dead at Moriches Inlet, March 31, 1936 (S. Raven); one was caught and photographed at Oak Island Beach, January 16, 1938 (Kimball); one was captured at Long Beach, February 21, 1940 (Arbib).

Brünnich's Murre

Uria lomvia lomvia (Linnaeus)

The Brünnich's Murre is another rare and irregular winter visitant to our region. Though less common than the Razor-billed Auk at Montauk Point and elsewhere along our coast, it occurs much more regularly away from the ocean than its thick-billed relative. There are numerous records sprinkled all around the periphery of Long Island with a goodly number on the Sound, one as far west as Sand's Point. The bird is rare and irregular on the New Jersey coast, and it casually straggles into Raritan Bay, on the waters around Staten Island and up the Hudson River. A record of one on the reservoir at Orange, New Jersey, December 24, 1899 (Babson), is remarkable. There are twelve winter records for Bronx and Westchester Counties, four from the Hudson River, eight from the East River and Long Island Sound.

The Brünnich's Murre has been recorded on Long Island as early as November 13 (*vide* Chapman), at Center Moriches, Long Island, as early as November 20, 1937 (Wilcox), and on

several occasions later in this month. The large majority of records come in December, January and February and since they occur principally after sustained easterly gales it is probable that the species is not uncommon in winter fifteen or more miles off shore. The discovery of a Brünnich's Murre anywhere in our region is still a red-letter occasion for the local enthusiast. The highest count I know of for one day is a flock of eight in Moriches Bay, Long Island, December 8, 1932, one of which was collected by duck hunters. The bird is very rare in March, and the latest record is from Orient, Long Island, April 2, 1935 (Latham).

Dovekie

Alle alle (Linnaeus)

The little Dovekie from the far north, like all the Alcidae, is strictly maritime in our region and very infrequently approaches the coast except when forced in by powerful gales. Griscom mentioned some twenty records between 1883 and 1923, all but one from Long Island. In 1928 over fifty Dovekies were seen alive or picked up dead along the south shore of Suffolk County, and the next three winters gave Long Island many more records. Then a tempest on November 19, 1932, apparently caught a big movement of Dovekies off our coast, and the birds were blown ashore literally by the thousands. On that date LeRoy Wilcox estimated seeing over three thousand on Long Island between Moriches Inlet and Shinnecock Bay. Specimens were picked up at numerous points on Long Island and at scattered points throughout the interior. This flight produced records for all major localities in the New York City region (for detailed accounts see *The Auk*, 1933, Vol. 50, p. 325; 1935, Vol. 52, p. 448). Since this invasion the species has been recorded in small numbers along our coast every winter. It is still an extremely rare winter visitant even along the coast, however, and it goes unrecorded for years at a time in most sections. It is purely

casual away from the ocean. Montauk Point is the only promising place on land to look for this species, but even there one will often scan the ocean for several days without seeing a single individual.

It is impossible to ascertain whether the September and October records for Long Island represent early migrants or merely vagrants that summered locally. The first birds ordinarily arrive between mid-November and mid-December. The status of the bird for any one winter is extremely variable, in fact unpredictable, movements being correlated with meteorological disturbances. After the middle of March the species is fortuitous, yet there are times when a few individuals linger into the summer, and I admit my astonishment to find records for every month in the year. To cite one example, Roy Latham found Dovekies off Montauk Point, Long Island, during June and July, 1929. He saw a dozen in one day, collected specimens during the last week in June and the first week in July and saw a few as late as the middle of this latter month. Such occasions, of course, are decidedly unusual as the species is essentially a winter visitant.

Black Guillemot

Cepphus grylle grylle (Linnaeus)

Though the Black Guillemot or Sea Pigeon breeds commonly along the northern half of the Maine coast, it is an extremely rare winter visitant to the eastern end of Long Island and purely casual elsewhere in our region. There is an old specimen from Long Island in the Lawrence collection. The recent sight records for Montauk Point are as follows: January 1, 2 and February 22, 1921 (Griscom, Crosby, Janvrin); March 12, 1922 (Griscom and LaDow); November 5, 1929 (Kassoy, Kuerzi, Wilcox); October 26, 1930 (Whitaker); January 3, 1932 (Woodmere Academy Bird Club); December 27, 1936 (Breslau, McKeever, Sedwitz); March 27 and 31, 1940 (C. Cobb, Helmuth *et al.*).

There are very few reliable records elsewhere in our region: Manhattan Beach, Long Island, January 6, 1929 (Cruickshank); Orient, Long Island, April 2, 1934 (Latham); Manursing Island, Westchester County, January 30, 1932 (Kuerzi); Newark Bay, New Jersey, December 27, 1936 (Urner); Jersey City Reservoir at Boonton, New Jersey, November 26, 1939 (Cadbury and Hiatt). This last record is remarkable, but it is difficult to see how an experienced observer like Mr. Cadbury, who has seen hundreds of these birds in the north, could possibly err.

Atlantic Puffin

Fratercula arctica arctica (Linnaeus)

The comical Puffin or Sea Parrot is an accidental winter visitant to Long Island. It was reported by DeKay, Giraud and Lawrence without definite data. Three specimens have been taken in Suffolk County: Center Moriches, December 15, 1882 (Foster); Montauk, March 30, 1902 (Braislin); one found dead at Montauk, spring of 1915 (J. Weber). In addition I find two recent sight identifications from the eastern end of Long Island: one at Orient, April 7, 1931 (Latham), and four off Montauk Point, February 1, 1936 (Pangburn).

COLUMBIDAE: PIGEONS AND DOVES

Domestic Pigeon; Rock Dove

Columba livia Gmelin

Those descendants of the Domestic Pigeon that are self-supporting and absolutely free have just as much right to a place on our avifaunal list as has the pheasant. The large majority of our pigeons are definitely slate-colored with greenish and purplish reflections on the head and breast, closely resembling the Rock Dove from which they originally descended. It is true that countless varieties resulting from the process of artificial selection encouraged by the pigeon fancier

are at large, but such specimens form only a small part of the entire population and tend to disappear under a free existence. The bird is a permanent resident and has been found nesting during every month of the year.

Eastern Mourning Dove

Zenaidura macroura carolinensis (Linnaeus)

The Mourning Dove is a bird of the open countryside, showing a marked preference for cultivated lands, rural roadsides, fields with nearby thickets of second growth and large estates having lawns sprinkled with dense clumps of conifers. It is an uncommon to common summer resident in most localities where the forementioned habitat is to be found. It has virtually disappeared as a breeding bird within the boundaries of New York City except on Staten Island and in the wilder sections of Bronx and Queens Counties. It is an uncommon summer resident in all heavily settled areas and rare at any time in climax woodlands. It is rather common during migrations over the larger part of our region, even on the outer strip of Long Island.

A few Mourning Doves sometimes arrive during the initial week in March, but it is usually mid-March before the first widespread wave takes place and always the second week in April before a spring peak is reached. At this season one will often see several dozen birds in a day in the best localities. Migrants are passing through up to the third week in May. The flimsy nest is placed in almost any conceivable type of growth, usually from four to twenty feet from the ground. There are normally two broods, local egg dates concentrated between mid-April and early June, with extremes March 20 and August 25. By the middle of July the southward migration begins. It is quite extended, the birds coming in irregular waves from early August through October. At this season flocks of from fifty to two hundred birds are sometimes recorded. By the third week in November most of the birds

have gone south. Over the larger part of our region the discovery of a Mourning Dove in December, January or February is very unusual, yet in some sections of Nassau and Suffolk Counties where a great deal of feeding is done the species is regular in winter, and I have known remarkable flocks of over one hundred birds to remain all through the winter.

Passenger Pigeon

Ectopistes migratorius (Linnaeus)

This beautiful pigeon is now extinct. It was formerly an abundant transient throughout our region, especially in the fall during September and October. The merciless slaughter of the nineteenth century was, however, more than it could stand, and by 1875 it had become a very rare bird. Dutcher gives ten Long Island records between 1885 and 1890, the last a flock of six seen at Miller Place in the fall of 1890 (A. Helme). The last record for Westchester County is October 11, 1888 (G. Thayer), and the last for New Jersey is from Morristown, October 7, 1893 (A. Frost).

Eastern White-winged Dove

Melopelia asiatica asiatica (Linnaeus)

A specimen of this southwestern species was collected at Water Mill, Long Island, November 14, 1929 (Wilcox). This is the only record for the entire state.

Eastern Ground Dove

Columbigallina passerina passerina (Linnaeus)

The occurrence of this diminutive southern dove in the New York City region must be regarded as purely hypothetical. When a boy Dr. George B. Grinnell shot a small pigeon out of a flock in a tall tulip tree on the upper end of Manhattan Island. Mr. John Woodhouse Audubon upon seeing the bird proclaimed it a Ground Dove. Unfortunately the specimen was not preserved, and it would certainly be unwise

to add a species to the list of New York State birds on such unsatisfactory evidence. The October date plus the reported occurrence of this terrestrial bird at the top of a tall tree makes the record more difficult to believe. As Dr. Frank M. Chapman has suggested, even if the identification were correct there remains the possibility that this individual was but an escaped cage-bird.

PSITTACIDAE: PARROTS

Carolina Paroquet

Conuropsis carolinensis carolinensis (Linnaeus)

Mr. Warren F. Eaton (*Proceedings of the Linnaean Society*, 1935, No. 47, p. 54) wrote as follows: "Albert Emmet Hedden, father-in-law of Harry Peck Havell of East Orange reported that Carolina Paroquets appeared in his father's orchard in the 'eighteen fifties.' They did considerable damage to the apples, picking out the seeds, and were regarded as destructive pests. They flew about in little flocks and were seen during several hot summers."

CUCULIDAE: CUCKOOS, ANIS, ETC.

Yellow-billed Cuckoo

Coccyzus americanus americanus (Linnaeus)

The Yellow-billed Cuckoo is essentially a bird of dense thickets, orchards, the edges of woodlands, shrub-dotted fields and gardens having quantities of ornamental bushes. It is so secretive and inconspicuous that one has difficulty determining its exact status in any one area. The loud, far-reaching wooden notes are ordinarily the only indication that the bird is present. It is undoubtedly a fairly common summer resident in favorable habitat throughout our region, but it is known only as an unusual to rare transient in the parks of the large urban developments, on the extensive coastal

marshes, along the outer strip and in other sections where it does not breed.

The Yellow-billed Cuckoo has been recorded at Massapequa, Long Island, as early as April 29, 1938 (J. Elliott), and in four different localities as early as April 30 but it is regularly May 10 and often May 20 before the first birds arrive from the south. Migrants are passing through up to the middle of June and casually later. The nest is placed in a bush, vine or tree from four to fifteen feet from the ground. Locally there is one brood, possibly sometimes two, local egg dates concentrated in the first half of June, with extremes May 18 and August 19. The nature of the bird makes it impossible to give an exact statement of its abundance. Though there are indications that it is fairly common, unusual indeed is the day one sees or even hears over six individuals. By mid-July Yellow-billed Cuckoos commence to show up in city parks and other areas where the species does not nest, and this undoubtedly marks the beginning of the fall migration period. The major part of the southbound flight comes in August and September with a peak sometime during the last week in August or the first week in September. After the first light frost in late September the Yellow-billed Cuckoo is a very rare bird, yet there are over two dozen October records and one for Long Island as late as November 2 (*vide* Griscom).

Black-billed Cuckoo

Coccyzus erythrophthalmus (Wilson)

The local distribution, periods of migration and habits of the Black-billed Cuckoo are virtually identical to those of the preceding species. It is apparently the more common of the two in the highlands of the interior and the rarer of the two elsewhere. It is a fairly common to uncommon summer resident over the greater part of the New York City region and an uncommon to rare transient wherever it does not breed.

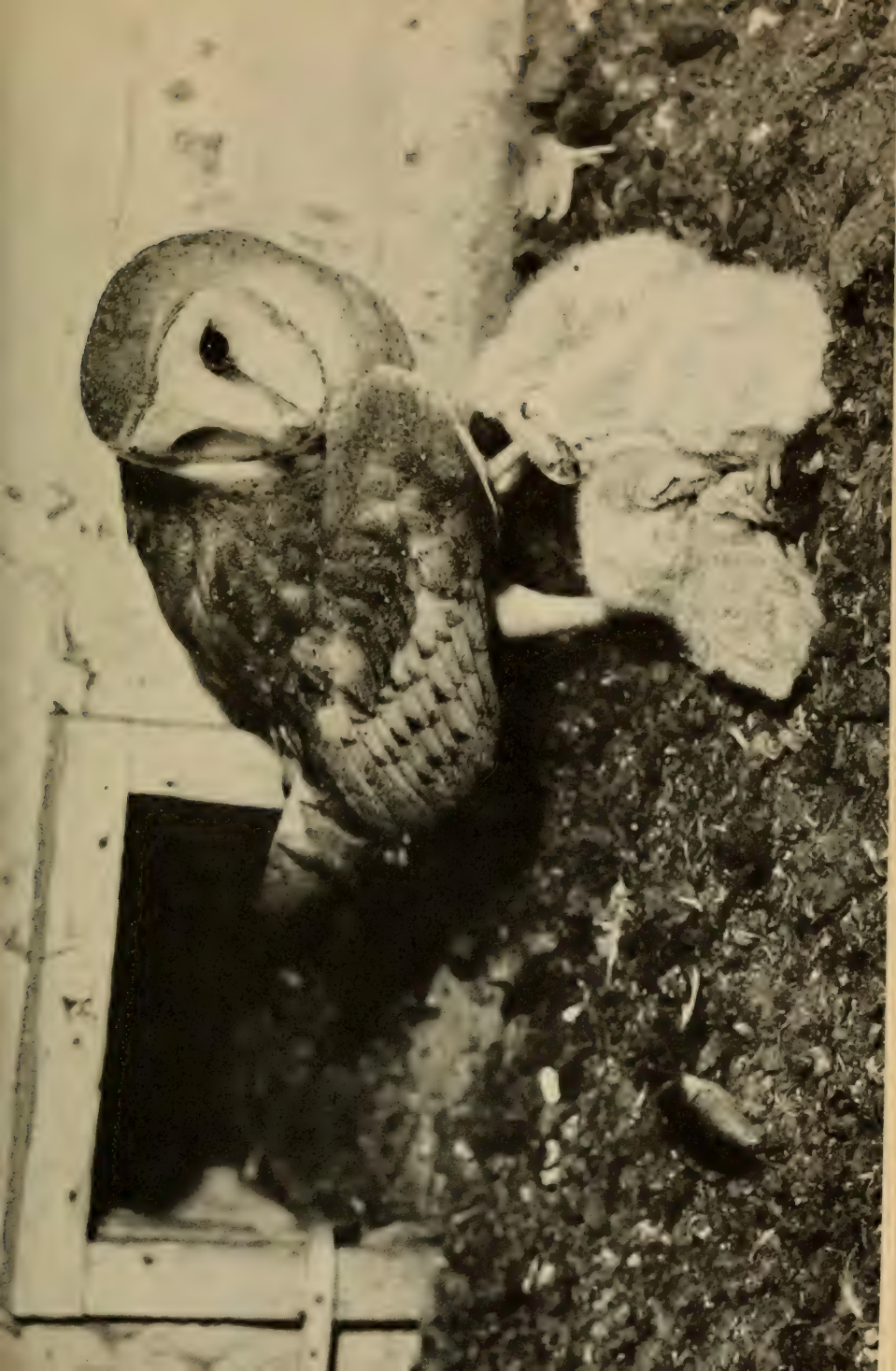
The Black-billed Cuckoo has been seen at Bayside, Long Island, as early as April 28, 1935 (Sabin), and in several localities within the next five days, but such dates are extraordinary as the species usually arrives in a widespread wave around the middle of May, and migrants are passing through up to the third week in June. The nest is placed in a bush, tree or vine, usually between four and twelve feet from the ground. There is probably but one brood, local egg dates concentrated in the first half of June, with extremes May 21 and August 3. During the third week in July fall migration commences, but the large majority of birds wait until the last half of August to pass through. After the first light frost in late September the Black-billed Cuckoo is a very rare bird. Periodically a few linger through October, and I find a record for Mastic, Long Island, November 4, 1917 (J. T. Nichols), and one for Long Island, November 13 (*vide* Griscom).

TYTONIDAE AND STRIGIDAE: OWLS

Barn Owl

Tyto alba pratincola (Bonaparte)

The Barn or Monkey-faced Owl is so strictly nocturnal, so silent and so easily overlooked that it has the undeserved reputation of being an extremely rare species locally. It seems to be principally a bird of disturbance communities seeking retreat in belfries, dove-cots, church steeples, old buildings, barns and living upon the rats and mice that are so abundant in such settings. Scientific investigations have proven beyond any doubt that this species is a great benefactor to mankind and should be rigidly protected at all times. It is occasionally found nesting in hollow trees, but even in such situations the birds are ordinarily in the immediate vicinity of farms, estates or suburban homes. Whether the scarcity of records for wilderness areas correctly represents the status of the bird in such places still awaits clarification. From time to time a



bird, rarely as many as five, will be found roosting in a dense conifer grove and, if undisturbed, may remain for months in such a retreat.

The Barn Owl is probably an uncommon permanent resident in favorable habitat throughout our region. In the last ten years the remarkable total of twenty-eight nesting sites has been found, but unfortunately many of these sites have since been deserted or destroyed. The nest is made out of disintegrated pellets and is ordinarily placed in a dark corner of one of the man-made structures already listed, less commonly in a hollow tree or a large bird house. There are one or two broods and while complete clutches of eggs have been found during every month in the year with the exception of January, they are most prevalent from March to September. Observations at Cape May indicate that there is such a thing as a Barn Owl migration, but I can give no data on this subject for our region. The bird is a possibility in any place at any time of the year, but away from the nesting grounds it is ordinarily rare or unrecorded.

Eastern Screech Owl

Otus asio naevius (Gmelin)

The little Screech Owl is a fairly common permanent resident over the greater part of our region, showing a marked preference for disturbance communities and even breeding in the heart of the metropolis in such places as Central Park and along Riverside Drive. It is rare along the outer strip of Long Island, on the great tidal marshes and in the extensive heavily wooded sections of the interior. By far the best place to look for the bird is in an old neglected apple orchard where there are numerous cavities. The Screech Owl is practically, though not strictly, nocturnal and were it not for the unmistakable tremulous wail its presence would seldom be detected. The bird is, however, much more widely distributed than one might believe. On most censuses I have had no diffi-

culty recording the species on the daily list. It was just a matter of selecting a likely-looking area, going there at dusk, giving a crude imitation of the quavering notes, and awaiting a prompt response. If one place failed, a second try in another likely-looking area invariably produced results. Though a permanent resident, there are occasional suggestions of a dispersal or light migration especially during severe winters. The bird nests in a hollow tree, in a large bird house, or in the nook of some building. There is but one brood, complete clutches of eggs being most prevalent in April, with extremes March 29 and May 18.

Arctic Horned Owl

Bubo virginianus subarcticus Hoy

"An accidental visitant from the north. A bird was shot in Bronx Park on February 15, 1919, and brought to Mr. Lee S. Crandall, who saw at once that it was not a typical specimen and forwarded it to the American Museum. It is a female, and must be referred to this race. This is the first record for New York State. It is of interest to note that the same subspecies was obtained in Massachusetts the same winter, as recorded by Glover M. Allen" (Griscom).

Great Horned Owl

Bubo virginianus virginianus (Gmelin)

It has frequently been stated that the Great Horned Owl is a species that will not tolerate the encroachment of civilization and progressively disappears as a breeding bird as man takes over the wilderness. This is true for the larger part of our region yet in some sections, especially in New Jersey, the species is apparently adapting itself to changing conditions, and a few pairs are even nesting on the very outskirts of some of the larger towns. At present the Great Horned Owl is certainly faring much better than the Barred Owl, and in

a few localities it is even showing signs of increasing. In New Jersey it is now a not uncommon permanent resident in all but the too densely populated suburbs near the Hudson. It is an uncommon permanent resident in the wilder sections of Rockland and Suffolk Counties and a rare permanent resident in northern Westchester County. Very few pairs breed outside of the sections already outlined. A pair or two on the Palisades are the only ones still nesting within the greater metropolitan area. Wherever the bird does not breed it is considered an uncommon to rare late fall and early winter visitant.

Like most owls this species is virtually nocturnal, excessively wary and secretive and were it not for its bass hooting it would probably go undetected even in the sections where it breeds. It is especially noisy during January and February and again in the fall. Though considered a permanent resident, there is sufficient evidence to prove that a great many Great Horned Owls are migratory. The species regularly shows up in sections where it does not breed, especially between Thanksgiving and the beginning of January, and occasionally these movements are rather pronounced. As many as five dozen birds have been killed on one local game farm during a single winter, providing concrete evidence of the mobility of the species.

The Great Horned Owl breeds most frequently in deep woodlands, using an old nest of a crow, hawk or squirrel as the foundation for its own. Occasionally a large hollow tree is utilized and rarely a cave or ledge on the side of a cliff. There is but one brood; complete clutches of eggs have been found from February 15 to April 20 with the greatest number concentrated in March. There is, however, proof of much earlier clutches of eggs. On February 22, 1933, Mr. Herbert and I found two newly hatched young on a ledge of the Palisades, indicating that the eggs must have been laid about January 22.

Snowy Owl*Nyctea nyctea* (Linnaeus)

The magnificent Snowy Owl is a bird of open lands, showing a marked preference for the outer beaches, the extensive tidal marshes and the rolling moors of Montauk. It occurs much less regularly in the lowlands of the interior and is virtually unknown in brush coated or wooded areas. Its choice of open habitat in conjunction with its large size, showy plumage and diurnal habits makes it very conspicuous whenever it does occur. It ordinarily perches on the ground, preferably on the peak of a sand dune, rock or log, rarely on a pole or tree more than twenty feet high. The bird is a rare irregular winter visitant from the Arctic, and while a few undoubtedly reach the south shore of Long Island every winter, the species ordinarily goes unrecorded except during flight years. These invasions are correlated with a failure of the food supply in the far north. The most pronounced flights have occurred during the winters of 1876-77, 1882-83, 1889-90, 1901-02, 1905-06, 1926-27, 1937-38, 1941-42. One considers himself fortunate indeed to see a single Snowy Owl anywhere in our region, yet on several occasions during the invasion of 1937-38 I saw six in a morning along the outer strip of Long Island between the Meadowbrook Causeway and Fire Island Inlet.

On Long Island this beautiful owl is fairly common during flight years along the south and east shores, always rare on the north shore west of the Orient Peninsula and very rare even on the larger plains and fields of the interior. It is less common on Staten Island and on the New Jersey coast than it is on the south and east shore of Long Island and is ordinarily recorded there only during flight years. There are now numerous records for Newark Bay and other tidewater localities in New Jersey and scattered records for the interior of the state, some as far inland as Morristown, Troy Meadows and Chest-

nut Ridge. Most of the Bronx and Westchester County records are concentrated on the tidal marshes along the Sound. There are only a few records for Rockland County.

The Snowy Owl has arrived on Long Island as early as October 17 (*vide* Griscom), at Idlewild, Long Island, as early as October 20, 1935 (Lind and Walker), and as far inland as Englewood, New Jersey, on November 4, 1922 (Chapman and MacKay). The majority of records fall between mid-November and the end of February. From time to time a few birds linger through March, and I find a record for Bronx County as late as April 5, 1927 (Kuerzi), and records for Idlewild, Long Island, as late as May 3 and 4, 1934 (Mayer and Sedwitz).

American Hawk Owl

Surnia ulula caparoch (Müller)

This diurnal species is an accidental visitant from the northwest. A specimen shot at Bay Ridge, Long Island, about 1863 is now in the Museum of the Long Island Historical Society. Mr. Roy Latham collected one at Orient, Long Island, on December 28, 1900. There is a specimen in the Dickinson collection reported by LaRue Holmes as taken in Essex County, New Jersey, in 1904.

Burrowing Owl

Speotyto cunicularia hypugaea (Bonaparte)

This little owl from the western United States has once been taken in our region, but the record is so remarkable that one unavoidably suspects an escaped pet. The specimen referred to flew into a house in New York City on August 8, 1875, and was caught alive. Both Chapman and Griscom wisely placed this species on the hypothetical list.

Northern Barred Owl

Strix varia varia Barton

Up to fifteen years ago this was by far the best known and most common of our larger owls. Unless disturbed too

much or shot out it clung to favorite nesting grounds in the face of encroaching civilization and even bred within the New York City limits in such places as Inwood Park on Manhattan Island and Van Cortlandt Park in Bronx County. It was the common hoot owl of the countryside, and a crude imitation of its eight-syllabled hoot in the territories of resident pairs usually brought forth an immediate challenge. Perhaps its inquisitiveness and its trusting nature have been its undoing, for in our region the species has decreased alarmingly in the past fifteen years and it has disappeared from many of its former haunts.

The Barred Owl is one of the few members of its family for which it is possible to give a fairly accurate statement of its distribution, for it is a vociferous bird and its loud, baritone couplets and guttural wails carry over long distances. It is partial to lowlands, especially deeply wooded swamps, occupying the same type of country as the Red-shouldered Hawk and generally avoiding the wilder sections frequented by the Red-tailed Hawk and the Great Horned Owl. At present it is an uncommon permanent resident in the forementioned habitat over the greater part of New Jersey, Rockland County and northern Westchester County. Very few pairs still survive in the southern half of Westchester County and in the not too heavily populated suburban areas of New Jersey. For some reason it is an astonishingly rare bird on Long Island at any season, and many large areas are without a single record. It has apparently always been rare as a breeding bird on Long Island, and the only positive nesting records before me are from Meadow Brook, Heckscher Park and Shelter Island. The bird generally deposits its eggs in a hollow tree, in the old nest of a crow, hawk or squirrel and very infrequently constructs a nest of its own. There is but one brood, complete clutches of eggs being most prevalent in March, with extremes March 4 and May 8.

Whereas the Barred Owl is a permanent resident in locali-

ties where it breeds, elsewhere it is known chiefly as a late fall or winter visitant. Individuals frequently pass the winter in conifer groves even in the parks of our larger cities, and during marked flights in December I have seen four or more in one morning in the hemlock grove of the Bronx Botanical Gardens. During these early winter movements individuals occasionally stop off even in such places as Central, Morning-side, Prospect and City Hall Parks and sometimes remain for a week or more.

Great Gray Owl

Scotiaptex nebulosa nebulosa (J. R. Forster)

An accidental visitant from the north. Mr. Arthur H. Helme collected a specimen at Mt. Sinai, Long Island, but unfortunately mislaid the date. Thurber (1887) records one as shot near Mendham, New Jersey, by the father of a Mr. Fairchild. This record lacks definite evidence and must be regarded as unsatisfactory.

Long-eared Owl

Asio wilsonianus (Lesson)

This species is rather partial to conifer thickets. It is so secretive, so strictly nocturnal and generally so taciturn that it is readily overlooked, and it unquestionably breeds more regularly than the few records would indicate. I have often explored a cedar grove near Massapequa, Long Island, where I have found the species nesting and where the birds are permanent residents and only by keeping very alert have I been able to catch fleeting glimpses of them disappearing into the vegetation ahead on silent wing. Even at the height of the courting season the birds are surprisingly quiet, and the soft dove-like cooing or the slow *hoop-hoop-hoop* could easily go unnoticed. It must be added, however, that occasionally this species gives some of the loudest, most ungodly screams and cackles. In the last twenty years at least twelve nesting sites

have been found in the New York City region, half of these on Long Island. The nest is usually in a conifer from ten to thirty feet from the ground, occasionally in a deciduous tree, rarely on the side of a cliff or in a hollow tree. There is but one brood, complete clutches of eggs being most frequent in April, with extreme dates March 18 and May 23.

The Long-eared Owl is a permanent resident in all sections where it breeds. Elsewhere it is known chiefly as an uncommon winter visitant. There is generally a definite movement in late November, occasionally a lighter return flight in early March and periodically marked invasions in mid-winter after a series of severe snow storms to the north of us. As a winter visitant the bird is a possibility in any locality, but it is naturally exceedingly rare on the coastal meadows and along the outer strip and is either exceedingly rare or overlooked in the wilder climax woodlands throughout the region. Most of our records come from conifer thickets in cemeteries, on estates, in parks, in nurseries and around reservoirs. Unless disturbed too much, birds will often roost day after day for several months in one tree, and an analysis of the pellets below such a perch will invariably show that the birds are living almost exclusively on small rodents and are extremely beneficial to man. The wintering or migrant Long-eared Owls are rather gregarious and are usually encountered in groups of four to six, rarely in flocks as large as sixteen.

Short-eared Owl

Asio flammeus flammeus (Pontoppidan)

In our region the Short-eared Owl is extremely partial to the extensive tidal marshes and salt meadows and it breeds only in such habitat. There has been a marked decrease in the last twenty years, and the bird is fast disappearing as a summer resident. It breeds most regularly along the south shore of Long Island, in small numbers on the east shores of Suffolk County and on the larger coastal marshes of New Jersey,

and casually on Staten Island and along the Sound in Bronx, Westchester and Suffolk Counties. Over the larger part of our region the Short-eared Owl is known only as a transient and winter visitant. It is a fairly common transient and an uncommon winter visitant on the tidal marshes, a very uncommon transient and a rare winter visitant on the larger fresh-water marshes, and a very rare or casual transient elsewhere. Occasionally individuals are found roosting in trees, especially in dense conifers, but such occasions are infrequent as the bird ordinarily rests on the ground. It is one of the most diurnal of our owls, and on dull days it is often seen bounding over the marshes like a giant bat.

The first migrants usually arrive from the north on the heels of the first light frost in September. Most of the birds pass through during October and November, and they are all too frequently shot by hunters who do not realize the usefulness of the species. A few winter each year along the open tidal marshes. With the coming of the first sustained thaw in early March the Short-eared Owls reappear but in much smaller numbers than in the fall. This northward movement regularly extends to the middle of April and occasionally later. By early April the resident birds are on their territories, and breeding sites may best be detected by the spectacular aerial courtship ceremonies which ordinarily take place at twilight. The nest is placed on the ground. There is but one brood, local egg dates being most prevalent in May, with extremes April 24 and June 23. During migrations and in winter the species is generally gregarious, and therefore when one finds one bird he may expect at least five or six, occasionally fifteen, rarely concentrations of over twenty.

Richardson's Owl

Cryptoglaux funerea richardsoni (Bonaparte)

Mr. Frank E. Watson, one of our veteran observers, had a very satisfactory study of a Richardson's Owl at Kingsland,

New Jersey, on March 10, 1929. This northern species is occasionally quite common in northern New England in winter, and specimens have been taken as far south as Connecticut and Pennsylvania. Whereas no specimen has ever been taken within our boundaries, it would be ridiculous to relegate the bird to the hypothetical list after having received so detailed and convincing a description of the observation from so experienced and careful an observer.

Saw-whet Owl

Cryptoglaux acadica acadica (Gmelin)

This smallest of our eastern owls is an irregular winter visitant. Though a few undoubtedly reach the New York City region each winter they are generally overlooked. Three out of five years there are light flights and once in five, marked invasions. During these heavy movements the species is recorded in all major localities and must then be regarded as fairly common for an owl. The bird is so small, so quiet and so nocturnal that it is generally seen only by those who make special efforts combing dense thickets of conifers, rhododendrons, laurel and deciduous tangles. Once a Saw-whet Owl is located the discoverer is rewarded with ample opportunities for observation. In fact, the bird is often so tame that one may pick it from its perch. Since there are records for every county in our region and since dates are practically identical, it would be superfluous to list occurrences in detail.

The Saw-whet Owl has arrived at Orient, Long Island, as early as October 10 (Latham), and in Westchester County as early as October 11, 1919 (Coles), but it is generally late November and often December before any marked flight occurs. Some years the species is virtually absent, others it is fairly common. Some years most of the birds reaching our region will remain throughout the winter, other years they will pass on to the south. During severe winters to the north of us there may be another flight in January. In short, the

status of the species for any one winter is unpredictable. Normally most of the birds have disappeared by the first week in March, but in years when autumn flights have gone far to the south there are return flights during this month. There are now dozens of April records, one for Staten Island as late as April 28, 1909 (Abbott). In addition I find two remarkable occurrences: a bird shot in St. Paul's churchyard, New York City, in June, 1842 (Giraud), and a pair found breeding at Miller Place, Long Island, in 1879 (Helme).

CAPRIMULGIDAE: GOATSUCKERS

Eastern Whip-poor-will

Antrostomus vociferus vociferus (Wilson)

The Whip-poor-will is just as nocturnal as any owl and were it not for its unmistakable rhythmic calls one would seldom suspect its presence even in regions where it is common. It passes the daytime in deep, dry woodlands resting on the ground or lengthwise on a limb, but as soon as darkness falls it heads for the open country and courses low over fields, meadows, low brush and even around farm yard buildings in pursuit of insect food. Though it may often call throughout the night, it is most vociferous during the two hours after sunset and the hour before dawn.

The Whip-poor-will still breeds commonly in the woodlands over the greater part of Suffolk County, Rockland County, northern Westchester County and rural New Jersey. It will not or cannot tolerate the proximity of civilization and is rapidly disappearing as a breeding bird in eastern Nassau County, central Westchester County and the suburban areas of New Jersey. Due to its nocturnal habits and its inconspicuousness when at rest, it is known only as an uncommon or rare transient visitant in areas where it does not breed although it probably occurs commonly. It is naturally very rare along the outer strip of Long Island and in all

heavily populated areas. In most localities, even at the height of the song season, one considers himself fortunate to hear three or four Whip-poor-wills in an evening, but in the best Whip-poor-will country in New Jersey and Rockland County I have counted several dozen calling in one evening.

The Whip-poor-will has arrived in Newark, New Jersey, as early as April 15, 1938 (Lang), and in Westchester County as early as April 16, 1919 (Coles). The species generally arrives in a marked wave during the last week of this month, and migrants are passing through until the third week in May, casually as late as the first week in June. The bird deposits its two eggs on the ground in dry woodlands. There is ordinarily but one brood, the few local egg dates ranging from May 12 to June 25. By the end of July most of the Whip-poor-wills become very silent. At the same time individuals show up in places where the species does not breed, and the fall movement undoubtedly commences this early. The large bulk of migrants passes southward during the first three weeks in September. During this month there is a slight renewal of song. The Whip-poor-will is a very rare bird in our region after September, and the latest record is from Bronx County, October 18, 1876 (Bicknell).

Eastern Nighthawk

Chordeiles minor minor (J. R. Forster)

The Nighthawk, unlike the Whip-poor-will, is not strictly nocturnal, and it is frequently observed in late afternoon, early morning and occasionally even in the middle of the day. It is seldom seen when at rest but once on the wing it bounds across the sky like some modern mechanical toy and cannot be overlooked. For nesting grounds it prefers rocky pastures or the graveled roofs in cities and towns. Few summer residents have shown a more marked decrease in our portion of New York State in the last twenty years. It no longer nests in New York City, has virtually disappeared from the pastures

of Westchester County, and very few towns in this county can now boast of breeding pairs. It is an uncommon summer resident in Rockland County. On Long Island it is purely casual as a summer resident in Nassau County and there has been a seventy per cent decrease in Suffolk County. Singularly the species is still a common summer resident in our portion of New Jersey, and it can be found nesting on the roof tops of most of the towns and cities. Everywhere throughout the region the species is a fairly common spring and a common to abundant fall transient.

As Griscom has pointed out, the reports of Nighthawks arriving in March and early April are erroneous and are referable to the Woodcock which gives a somewhat similar *peent* note. The species has been seen at Idlewild, Long Island, as early as April 17, 1936 (J. Elliott), and in several localities during the last ten days of this month but it is ordinarily May 10 before the first birds arrive. The bulk of migrants passes through during the last two weeks in May, and only stragglers are passing through up to the second week in June. This spring flight is sometimes astonishingly light on Long Island. The bird nests on the ground or on the roof of some building. There is but one brood, local egg dates concentrated in the first half of June, with extremes May 24 and June 28. On rare occasions a few southbound birds appear in late July, but it is ordinarily the second week in August before migration sets in. Maximum abundance for the entire year comes between August 20 and September 10. Whereas it is unusual to see over one or two dozen Nighthawks in a day away from nesting localities during the spring migration, the return flight is generally heavy and remarkable concentrations are often encountered. More than one thousand were seen over Port Chester, Westchester County, on September 4, 1936 (Cook), and several thousand, including a single breath-taking flock of seven hundred over South Amboy, were seen along the north New Jersey coast in early



September of 1935 (Urner). By the first week in October the Nighthawk is an extremely rare bird, yet stragglers have been seen on Long Island on November 3 (*vide* Griscom) and at Woodmere, Long Island, as late as November 12, 1930 (Woodmere Academy Bird Club).

MICROPODIDAE: SWIFTS

Chimney Swift

Chaetura pelagica (Linnaeus)

The Chimney Swift is one of the most conspicuous birds in our region during the summer months. Who is so unobservant as to overlook these sooty birds as, with quivering wings and erratic flight, they go twittering and zigzagging across the sky? With the exception of the heart of New York City the bird breeds commonly throughout our region wherever unused chimneys are to be found. There are no records of its nesting in hollow trees within our territory in recent years although it might possibly still do so in some of the wilder sections.

The Chimney Swift has arrived in Essex County, New Jersey, on the remarkable date of April 3, 1926 (Rusling), and in numerous localities as early as the second week in this month, but such records are unusual as the first migrants are not to be expected until late April. The main flight bringing the bulk of birds seldom arrives before May 3, and only stragglers are passing through after the end of this month. In our region the nest is placed in an unused chimney. There is but one brood, local egg dates concentrated in the first half of June, with extremes May 24 and July 3. With the coming of August the southward migration sets in, and maximum abundance for the entire year comes during the last half of this month. Whereas the spring flights are relatively light and the recording of over one hundred Swifts in a day is unusual, the fall movements are often spectacular, several

thousand occasionally being seen in an evening concentration. As Griscom has pointed out, after this August flight there is often a hiatus followed by a much lighter movement between September 20 and October 10. The Chimney Swift is exceedingly rare after the middle of October and the latest records are: Bronx region, October 26, 1922 (Kuerzi); Essex County, New Jersey, October 26, 1935 (Solomon); Idlewild, Long Island, October 28, 1937 (Mayer).

TROCHILIDAE: HUMMINGBIRDS

Ruby-throated Hummingbird

Archilochus colubris (Linnaeus)

This smallest of all local birds is a fairly common summer resident in the rural districts of our region. It becomes scarce or absent as a breeding bird near New York City and seldom nests within the limits of the metropolis. On the other hand it is very adaptable in its choice of nesting habitat, for I have seen nests in such diversified places as Bronx Park in New York City, an orchard on Long Island, and the heart of climax woodlands in Rockland County. The species does not nest on the outer strip of Long Island but there, as in most sections, it is a fairly common spring and a common fall transient.

The Ruby-throated Hummingbird has arrived in Woodmere, Long Island, as early as April 25, 1930 (Woodmere Academy Bird Club), in Idlewild, Long Island, as early as April 30, 1941 (Mayer), and in Bronx County as early as April 30, 1872 (Bicknell). The first birds ordinarily arrive around May 5, the spring peak comes during the middle of this month, and stragglers are passing through up to the second week in June. The beautiful lichen-covered nest is saddled on a small branch from three to thirty feet above the ground. There are generally two broods, local egg dates being most prevalent in late May and early June, with extremes May 14 and July 25. In summer even the keenest observer

seldom sees over six Hummingbirds in a day. A few south-bound migrants arrive during the last week in July, and by the third week in August maximum abundance for the entire year is reached. At this season the bird is widely distributed, and occasionally over two dozen birds may be seen in a single day. After the first light frost in late September the Ruby-throated Hummingbird is extremely rare, yet aberrant individuals were seen on Ward's Island, New York, October 19, 1929 (Cromwell), and at Long Beach, Long Island, October 23, 1939 (Cruickshank).

ALCEDINIDAE: KINGFISHERS

Eastern Belted Kingfisher

Megaceryle alcyon alcyon (Linnaeus)

The dashing, noisy Kingfisher is one of the characteristic summer birds of our waterways. It is partial to woodland ponds, rapid streams, rivers, large lakes or brackish bays and estuaries. The bird seldom fishes in the ocean proper and its occurrence there is indeed fortuitous. It is a fairly common breeding bird in most sections where fish and not too distant nesting banks are to be found. The number of pairs in any locality will be few, however, as each demands a large strip of territory and will not tolerate a rival on its bailiwick. The bird is gradually decreasing as a breeding species near the metropolis and, singularly, is known only as a common transient visitant along the outer strip of Long Island. It is a common transient throughout our region. A few regularly winter along the Hudson, the Sound and the larger brackish bays, canals and estuaries.

The arrival of the Kingfisher depends to a great extent upon the opening of our waterways, and consequently one must expect the bird earlier along the coast than inland. The initial movement usually comes with the first sustained thaw in early March, but this deals with few individuals and the



height of the spring movement seldom comes before mid-April. By the third week of this month the majority of breeding pairs are well established throughout the region. Migrants, however, continue passing through until the closing days of May. The nesting tunnel is almost invariably dug in the side of a bank or bluff. There is but one brood, local egg dates concentrated in the last two weeks of May and early June, with extremes May 1 and June 16. As early as the middle of July there are indications of a return movement, and the bird becomes increasingly common until the height of the fall migration during the third week in August. The Kingfisher is a conspicuous bird wherever it occurs and one might get the impression that it is abundant. Records indicate that it is unusual to see a half dozen Kingfishers in any one day of birding and very rare to record over fifteen even at the height of migration in the choicest localities. Just as the arrival of this grotesque bird depends upon the opening of the waterways, the departure of the majority of the individuals lingering into the fall depends upon the coming of the first freeze. The bird becomes increasingly scarce inland as October progresses and after mid-November it is a very rare bird. As far as the tide penetrates, however, the Kingfisher is fairly regular through November, and each winter at least several dozen individuals stay within our boundaries to brave the boreal blasts.

PICIDAE: WOODPECKERS

Northern Flicker

Colaptes auratus luteus Bangs

The Flicker is the most conspicuous, the most widely distributed and the best known of all our local woodpeckers. It is a common summer resident in all sections where there are trees. It is a very adaptable species and nests just as readily



in a city park, in a suburban yard or in a post at the edge of the coastal meadows as it does in the wildest sections of climax woods. Everywhere throughout our region it is a common transient. It is uncommon though regular in winter in the lowlands near the coast, but it abruptly disappears as one works inland and is virtually unknown at this season in the highlands of the interior.

The first definite movement of Flickers ordinarily arrives from the south on the heels of the first sustained thaw in mid-March, rarely as early as late February. April brings the peak of the spring migration, and a few individuals are passing through as late as the third week in May. The bird has been known to nest in a queer assortment of sites but the usual place is a hole in a tree. There is ordinarily but one brood, local egg dates concentrated in May, with extremes April 23 and June 28. By the end of July Flickers commence to show up along the outer strip of Long Island and in small city parks where the species does not nest. The main fall migration does not, however, set in until September, and the peak of abundance for the entire year usually comes in early October. At this season, during pronounced flights, I have counted over fifty in a day on Long Island. After the end of October the Flicker becomes increasingly scarce and it is usually a rarity inland by November.

Northern Pileated Woodpecker

Geophloeus pileatus abieticola Bangs

This largest and most retiring of all our local woodpeckers loves the seclusion of deep climax woods. By the end of the last century it had already been extirpated from Long Island, Bronx County, Westchester County, most of New Jersey and in truth was considered in danger of disappearing entirely from most of the northeastern United States. During the early part of the current century, however, there were grati-

lying indications that the bird was reestablishing itself in some old localities and there were even signs that the species seemed reconciled to live in proximity to civilization. The bird increased in the lower Catskills, the Berkshires and the hill country of Connecticut. It began to show up regularly in sections of Warren, Sussex and Passaic Counties in New Jersey. It is indeed a pleasure to be able to say that this splendid species has continued to show signs of coming back and in the wildest sections it is now fairly regular.

The Pileated Woodpecker does not occur on Staten Island and I can find no evidence that it ever did. It has been extirpated from Long Island, the last specimen taken in 1879. There are old records from both Brooklyn and Queens but no unquestionable records of its occurrence farther east than Jamaica. It is now a very rare permanent resident in the northern sections of Westchester County. Birds irregularly straggle as far south as Kensico and White Plains, casually as far as Grassy Sprain only five miles from New York City. The bird breeds fairly commonly in the highlands of Rockland County, and a few occasionally wander southward down the Hudson to Bergen County. In New Jersey it is a fairly common summer resident in the wilder sections and it is definitely increasing. As many as four have been seen in a day in the Kittatinny Mountains and on the Waywayanda Plateau. There is evidence that the bird is becoming less particular about its wilderness habitat and is spreading to the more built-up sections. Though a permanent resident wherever it breeds, a few birds have a tendency to migrate a few miles southward in fall and winter. There are now records for even Essex and Union Counties, some as far east and south as the South Mountain and Watchung Reservations. The Pileated Woodpecker nests in a cavity excavated in a tree (live or dead, deciduous or evergreen) twelve to sixty feet from the ground. There is but one brood and the few local egg dates are all in May.

Red-bellied Woodpecker*Centurus carolinus* (Linnaeus)

Until almost the middle of the nineteenth century this striking and noisy Woodpecker was listed as a "not very abundant" resident on Long Island. It has long since deserted this area and in the New York City region is now known only as an accidental visitor from the south. Griscom knew of three specimens from Long Island, the last in 1895. I find the following recent sight identifications of this species on Long Island: Orient, May 29, 1920 (Latham); East Hampton, July 15, 1929 (Helmuth); Montauk, September 2, 1929 (Helmuth); Prospect Park, June 27, 1935 (Cruickshank); Woodmere, December 23, 1936, and April 25, 1937 (D. Harrower); Prospect Park, May 13 to 19, 1940 (J. Elliott, Brennan *et al.*).

The bird has also occurred in Central Park, April 30 and May 1, 1909 (Griscom), and in Van Cortlandt Park, May 13, 1928 (Herbert, Kasso, Kuerzi).

In our portion of New Jersey a specimen was collected in Newton, November 16, 1889. Herrick reports another as taken by Dickinson but gives no details. There is but one recent reliable record, a bird seen at Pine Brook from January 25 to February 2, 1936 (Edwards and Rusling).

Red-headed Woodpecker*Melanerpes erythrocephalus* (Linnaeus)

This flamboyant woodpecker, though essentially a species of open woodlands, occurs wherever there are trees or poles. It is unquestionably one of the most erratic of our local birds, and I admit my total inability to explain its distribution and movements. The status of the bird in any one area for any one year is absolutely unpredictable. Over the larger part of our region it is now a rare transient, irregularly nesting and wintering. On the other hand in any one area it may be totally absent for several years, then show up in a spectac-

ular wave that passes right on, or it may suddenly invade the area, start nesting and settle down to be a permanent resident. Its migration periods are just as unpredictable. May and September are most frequently the months for flights, although inexplicable invasions have occurred in March, April and November. In fact, almost every conceivable possibility has occurred. There is evidence that the bird was formerly fairly well distributed throughout our region wherever tall deciduous trees were to be found and at that time it was not by any means as erratic in its movements.

At present the only place in our region where the Red-headed Woodpecker may be expected with any degree of regularity throughout the year is in the Upper Passaic River Valley in New Jersey, but even there it seems to be gradually disappearing. In the last ten years it has nested infrequently and sparsely in the remainder of New Jersey, in Bronx, Westchester and Rockland Counties and on Long Island. The bird nests in a cavity dug in a tree or post from six to forty feet from the ground. Locally there is but one brood, and the few egg dates I find for this region range from May 13 to June 20.

Yellow-bellied Sapsucker

Sphyrapicus varius varius (Linnaeus)

Although the Yellow-bellied Sapsucker is partial to woodlands, to shade trees of parks, and particularly to orchards, it may be expected as an uncommon but regular spring transient and a common fall transient everywhere in our region where there are trees. In the brush areas along the outer strip of Long Island it is exceedingly rare in spring and always uncommon in fall.

The Yellow-bellied Sapsucker has arrived in Rye, Westchester County, as early as September 7, 1933 (Cruickshank), and in Orient, Long Island, on September 8, 1941 (Latham), but it is ordinarily late September before the first widespread

movement occurs and always the second week in October before a fall peak is reached. Its numbers are subject to extensive variations from year to year. Some autumns it may be considered even locally abundant, and on one remarkable fall flight I counted twenty-seven Sapsuckers in a single day. After mid-November the bird is very rare, yet, after combining all available data, I find records for most major localities for every month in winter. There are thirty-two records for December, nine for January, seven for February and five for March. The spring flight regularly arrives during the second week in April, reaches a peak during the last week in this month, and is concluded by the fourth week in May. There are two very abnormal records: Central Park, July 1, 1909 (Crolius); Prospect Park, Brooklyn, July 14, 1909 (Victor).

Eastern Hairy Woodpecker

Dryobates villosus villosus (Linnaeus)

During most of the year the Hairy Woodpecker is essentially a bird of the deep forest, showing preference for such places as flooded woodlands and partially burned tracts where there are usually large supplies of dead trees. As soon as winter approaches, however, many individuals will come into farm yards, town parks and suburban grounds and even make use of the suet at bird feeding stations. Though not by any means as common as its small counterpart, the Downy Woodpecker, it is considered a fairly common permanent resident in most wooded sections throughout our region. The bird is decidedly less common near the coast, is a rare breeder over the greater part of Long Island and is purely accidental at any time of the year in such localities as Long Beach, Jones Beach and Fire Island.

Were it not for such observation points as Central Park, one would seldom think of the Hairy Woodpecker as being migratory. There is, however, a definite movement during the

first half of October and a lighter return flight between March 10 and the first week in May. The bird nests in a cavity of a tree from five to sixty feet from the ground. There is but one brood, local egg dates ranging from April 20 to May 27. One should not expect to see more than three or four Hairy Woodpeckers in a single day anywhere in our region. My highest count for one day in almost twenty years of birding is only eleven.

Northern Downy Woodpecker

Dryobates pubescens medianus (Swainson)

This smallest of local woodpeckers is one of the most widely known of our permanent residents, occurring commonly throughout the region wherever there are trees. Unlike the Hairy Woodpecker it is not essentially a bird of the deep woods and will nest just as readily in orchards, in city parks and in the shade trees of our villages. A pair or two still breed in Central Park. On the other hand, the bird is one of the rarest of finds at any season on the outer strip of Long Island.

Though the Downy is a permanent resident, there is appreciable migration, especially in October, and at that time we are most likely to get our few annual records for small city parks and the outer strip of Long Island. In winter it is one of the most characteristic birds of the suburban yards, readily coming to feeding stations for suet. The species is so conspicuous at this season that it appears to be much more common than it really is. In fact, very infrequently does an observer see over fifteen individuals on any one day, and a count of five or six is much more normal. The spring flight, which extends from mid-March to early May, is ordinarily so light that it invariably goes unnoticed. The nesting cavity, excavated by the birds, is from five to fifty feet from the ground. There is but one brood, local egg dates ranging from May 10 to June 23.

Red-cockaded Woodpecker*Dryobates borealis* (Vieillot)

An accidental visitant from the south. A specimen in the collection of G. N. Lawrence was collected near Hoboken, New Jersey, sometime before 1866.

Arctic Three-toed Woodpecker*Picoides arcticus* (Swainson)

Griscom called this species an accidental visitant from the north and mentioned specimens taken at Bridgehampton and Sag Harbor, Long Island, during the winter of 1886-87. Kuerzi knew of two records in the Bronx region prior to 1915.

The frequent occurrence of the Arctic Three-toed Woodpecker in the Hemlock Grove of the Bronx Botanical Gardens between 1923 and 1927 is one of the most mystifying phenomena of local ornithology. The records are as follows: female, October 14, and male, October 18 and 20, 1923 (Kuerzi, Landis *et al.*); December 9, 1925 (Kuerzi); January 10, February 6, and November 14 through December 31, 1926 (numerous observers); January 1 through 31 and November 4, 1927 (Johnston, Kuerzi *et al.*). I find five additional records for Bronx and Westchester Counties: Van Cortlandt, October 10, 1925 (Cruickshank); Mt. Kisco, October 12, November 6 and December 11, 1925 (Mr. and Mrs. C. Tucker); New Rochelle, February 11, 1926 (Coles).

There are four records for New Jersey: specimen collected at West Englewood, November 29, 1923 (Griscom and J. Weber); specimens seen, West Englewood, October 18, 1925 (Herbert, Hickey, Kassoy); Montclair, February 10 and 11, 1926 (R. Howland); Englewood, February 16, 1935 (Heck and Janvrin).

I find but two recent records for Long Island: specimen collected, Georgica Woods, October 13, 1936 (Helmuth);

one seen, Montauk, December 26, 1937 (Berliner and Berolzheimer).

American Three-toed Woodpecker

Picoides tridactylus bacatus Bangs

On February 5, 1918, Mr. Charles Johnston, an experienced and meticulous observer, saw a male of this northern woodpecker near West Englewood, New Jersey. It was comparatively tame, was studied at leisure, and all identification points were noted. The observer was previously familiar with the Arctic Three-toed Woodpecker in life, knew the identification marks of the American Three-toed Woodpecker, and was fully aware of the rarity of this latter species even as far south as Massachusetts. In spite of the fact that no specimen has ever been collected south of Massachusetts, I can see no reason to relegate a bird so thoroughly identified to the hypothetical list.

TYRANNIDAE: FLYCATCHERS

Kingbird

Tyrannus tyrannus (Linnaeus)

This valiant flycatcher is very partial to rural districts especially around cultivated lands, orchards, the shores of lakes or streams and the bushes bordering marshes and meadows. It is a common summer resident over the greater part of the New York City region, and whereas a few pairs still nest on the outskirts of the metropolis it is gradually disappearing as a nesting bird from the ever-expanding suburbs. It nests only rarely along the coastal strip, but everywhere throughout our region it is a common transient visitant.

There is a unique arrival date for the Kingbird: Eastport, Long Island, April 4, 1931 (Wilcox). There are also many records from scattered points in our region for the

last week in April, but the species ordinarily does not arrive until the first big wave in May and never reaches a spring peak until the end of the second week in this month. On migration the Kingbird is the most gregarious of all our flycatchers and while usually seen in small groups of up to fifteen, I have often found flocks of fifty or more in northern Westchester County on spring mornings during exceptional waves. After May 26 most transients have disappeared, stragglers irregularly passing through up to the second week in June. The nest is placed in a tree, bush or on a stump, usually less than twenty feet above the ground. There is ordinarily but one brood, local egg dates concentrated in the first half of June, with extremes May 24 and July 12. Vagrants show up from time to time throughout June and July in places where the species does not breed. In late July there are definite signs that migration is under way, and in early August flocks regularly arrive from the north. The peak of abundance for the entire year comes during the last ten days of August, and on rare occasions remarkable flocks of several hundred Kingbirds are seen flying over. After mid-September the species is extremely rare, the latest record before me from Orient, Long Island, October 24, 1940 (Latham).

Gray Kingbird

Tyrannus dominicensis dominicensis (Gmelin)

"Accidental visitant from the south. One specimen taken at Setauket, Long Island, about 1874. One or two sight records from New Jersey before me, without any details, are not worth a moment's serious consideration" (Griscom).

There are three recent sight identifications of this species, all from Long Island and all by very experienced observers: Jones Beach, June 7, 1930 (Hix); Dyker Heights, August 22, 1930 (Johnston); Orient, April 29, 1921 (Latham).

Arkansas Kingbird*Tyrannus verticalis* Say

This western species must now be considered a rare but regular fall transient on Long Island, especially along the coastal strip. Elsewhere in our region its occurrence is still fortuitous. Griscom called the bird of casual occurrence and knew of but four local records.

Since 1926 the Arkansas Kingbird has occurred every year in numerous localities on Long Island from Brooklyn to Montauk, and there is no point in listing the sixty-three Long Island records before me. The large majority of dates are in September, with the earliest from Jones Beach, August 19, 1932 (Vogt), and the latest from Montauk Point, January 1, 1921 (Crosby, Griscom and Janvrin). There were apparently as many as six individuals at Jones Beach during September, 1933.

There is one old record for Riverdale, New York, October 19, 1875 (Bicknell). Singularly I find no recent records for our region away from Long Island, although there are records just to the north of us in Connecticut and just to the south of us along the New Jersey coast.

Scissor-tailed Flycatcher*Muscivora forficata* (Gmelin)

On November 23, 1940, Mr. and Mrs. Frederick Austin found an individual of this species perched on a dead branch near the Gilgo Coast Guard Station, Long Island. They wrote a very careful and detailed description of their observation and sent it to Roger Peterson who kindly sent the note on to me. Their detailed description is so perfect that I fail to see how the bird could have been anything but a Scissor-tailed Flycatcher. Though a bird of the southwest, it has occurred in southern New Jersey, Connecticut, Massachusetts, Maine and New Brunswick, Canada, and I can

therefore see no reason to relegate the bird to our hypothetical list on the flimsy basis that no specimen has been collected within our arbitrary borders.

Northern Crested Flycatcher

Myiarchus crinitus boreus Bangs

This loquacious flycatcher is a common summer resident over the greater part of our region wherever there are groves of tall deciduous trees. It is essentially a forest species yet frequently comes into orchards and suburban yards to nest. Its loud whistle is one of the characteristic sounds of our summer woods, and one of these birds cannot be in a locality for long without revealing its presence. The bird is disappearing as a breeder on the outskirts of New York City and around the edges of all our large towns. It is known only as an uncommon to rare May, August and early September transient on the coastal marshes and on the outer strip.

The Crested Flycatcher has been recorded at Orient, Long Island, as early as April 17, 1919 (Latham), and at many points in our region during the closing days of this month, yet the first big wave does not arrive until the initial week of May. The spring flight reaches a peak in mid-May, and at this season I have recorded thirty-two individuals in a vigorous day of birding in Westchester County. By the end of this month migration is virtually over, only stragglers passing through as late as the second week of June. The bird nests in a hole in a tree or post, or in a bird house from five to sixty feet from the ground. Locally there seems to be but one brood, egg dates ranging from May 18 to June 29. With the arrival of August a few southbound Crested Flycatchers appear. The height of the fall migration comes late in this month and individuals regularly linger through September, once in northern Manhattan as late as October 25, 1932 (L. N. Nichols). I find

several later dates but they are not satisfactory and are rejected.

Eastern Phoebe

Sayornis phoebe (Latham)

This is the first of our flycatchers to arrive in the spring, the last to leave in the fall, and the only one that might be expected in winter. It is a fairly common summer resident over the larger part of our region, becoming rare near New York City and at the edges of other congested areas. It does not breed on the Orient and Montauk Peninsulas or on the outer strip of Long Island, but in every locality the Phoebe is known as a common spring and an abundant fall transient visitant. Though not as common as the Crested Flycatcher, Wood Pewee and Kingbird over the greater part of the region during the breeding season, it is just as or even more numerous than any of these flycatchers during migrations. Since it is not as gregarious as the Kingbird, however, it is very unusual for an observer to see more than thirty Phoebes in a day even during the peak of the October flight.

Vagrant Phoebes are occasionally recorded in late February or early March, but the species ordinarily arrives with the second big wave of land-birds between March 18 and 23. The height of the spring flight comes in early April, and migrants are passing through in small numbers as late as the middle of May. The bird nests on cliffs, in upturned roots, under bridges, in old sheds and even over much-used doors. There are ordinarily two broods, rarely three, egg dates concentrated in early May, with extremes April 14 and July 8. The often-heard statement that the bird requires the proximity of water to its breeding grounds is discredited by the finding of nests in farm yards far from bodies of water and even on dry cliffs in the mountains of New Jersey. That the species does not nest in sheds on the

outer strip of Long Island where the insect population is high remains a mystery to me. With the first cool nights in early September the southbound migration sets in, and numbers swell until early October when the bird is at its peak of abundance for the entire year. After October the Phoebe is decidedly scarce, yet individuals regularly linger through November, and though the bird is very rare in winter there are now too many records of its occurrence at this season, especially along the coast, to list. The bird is extremely casual inland in winter.

Say's Phoebe

Sayornis saya saya (Bonaparte)

This western species was seen at Dyker Heights, Brooklyn, September 25, 1926 (W. Eaton), and September 28, 1926 (Nathan). Since both observers are experienced field students, and since specimens of Say's Phoebe have been collected in the autumn in Connecticut and Massachusetts, I can see no grounds for keeping the species off our list of accidental birds.

Yellow-bellied Flycatcher

Empidonax flaviventris (W. M. and S. F. Baird)

This little flycatcher is very partial to the woods, showing particular preference for damp, boggy areas bordering ponds, streams and swamps. Over the larger part of the New York City region it is an uncommon late spring transient and an uncommon to fairly common early fall transient. It decreases progressively eastward on Long Island and is decidedly rare even in fall everywhere along the south shores of Nassau and Suffolk Counties.

A sight identification of one at Bernardsville, New Jersey, April 26, 1928, seems open to question. The next earliest reports are from Ramapo, Rockland County, May 7, 1916 (Walsh), and Elmsford, Westchester County, May 8, 1937

(Cruickshank). The species ordinarily does not arrive until the third week in May. Most of the birds pass through during the last ten days of this month, and some are regularly recorded during the initial week in June. One specimen was collected at Englewood, New Jersey, as late as June 19, 1910 (J. Weber). Southbound birds have appeared as early as August 4, 6 and 7, but the bulk of migrants waits until the last week of this month and the first week in September to pass through. Though the species is of much more regular occurrence during late August and early September than at any other time, it must be said that one considers himself fortunate to see a Yellow-bellied Flycatcher in our region, and the day one finds over five individuals is indeed exceptional. As Griscom has pointed out, Woodruff and Paine's list of 1886 crediting E. T. Adney with dates from September 19 to October 10, 1885, is not convincing. In fact the species is very rare after the third week in September, the latest unquestionable date being one collected in Bronx County, October 6, 1881 (Bicknell).

Acadian Flycatcher

Empidonax virescens (Vieillot)

It seems expedient to quote the following paragraph by Griscom, "The identifiability in life of the species of *Empidonax* is a matter to which Messrs. W. DeW. Miller, J. T. Nichols, C. H. Rogers and the writer have given special attention. Collecting has proved that in spite of the greatest care, it is *impossible* to be absolutely certain in separating the Acadian, Alder and Least Flycatchers by color characters even in the spring. In the fall plumage it is out of the question, the determination of museum skins often being very critical. It is quite true that extremes in size or highly plumaged individuals can often be named with approximate certainty, but even here collecting has proved a low percentage of error. The songs of all three species are, however,

easily recognizable. Unfortunately, while the Chebec sings regularly on migration, the two rarer species are generally silent. In this respect they are exasperating birds. Every spring and fall I see individuals which I am convinced are one or the other but all too rarely will they open their mouths and sing their names."

The Acadian Flycatcher is a dweller of the margins of moist shady woodlands. It was formerly locally common as a summer resident near New York City but showed signs of decreasing by 1905 and a decade later was practically extirpated as a breeding bird. Mrs. Herbert Walter, who for many years studied the birds breeding around Cold Spring Harbor, Long Island, has told me that the disappearance of this species in that area seemed to be correlated with the disappearance of the chestnut trees. To-day in our region the Acadian Flycatcher is known primarily as a rare transient. Two or three pairs intermittently nest in southern Westchester County and a few occasionally in Monmouth County. Though the bird formerly bred locally along the north shore of Long Island from Jamaica to Cold Spring Harbor and on Gardiner's Island, there are no recent breeding records for these areas.

The Acadian Flycatcher has been recorded in Englewood, New Jersey, as early as May 5, 1897 (*Bird-Lore*), but it is usually the second week in the month before the species may be expected. Migrants have been seen as late as June 8. The bird generally places its loosely-built nest near the end of a branch from four to twenty feet from the ground. There is but one brood, local egg dates ranging from May 30 to June 27. There are often indications of a light return flight early in August. Most of the fall reports, however, are worthless. The latest unquestionable records before me are: one collected in Bronx County, September 19, 1885 (Dwight); one collected in West Orange, New Jersey, September 10, 1898 (Dwight collection); one picked up dead but in fresh condi-

tion at Jones Beach, Long Island, September 30, 1938 (J. Elliott).

Alder Flycatcher

Empidonax trailli trailli (Audubon)

This little flycatcher could not have been more correctly named, for it is very partial to deep alder thickets and except on migrations is very uncommon away from these moist retreats. In New Jersey it is a fairly common local summer resident in Morris, Warren, Sussex and Passaic Counties, decreases abruptly to the south, and nests only intermittently and very thinly in suitable habitat southeast to Monmouth County. It is a fairly common though local summer resident in Rockland County. In Westchester County from six to twelve pairs nest each year, most of these north of White Plains. The species was reported as nesting at Kissena Park, Long Island, from 1939 to 1941 (Fischer). Due to its secretive habits and its silence away from the nesting grounds, satisfactory migration data are rather meager. An analysis of all information indicates, however, that the bird is an uncommon transient in all sections, except along the south shores of Nassau and Suffolk Counties where it is extremely rare.

The Alder Flycatcher is one of the last birds to arrive in our region in the spring and it is seldom recorded before the fourth week in May. The earliest reliable record is from Essex County, New Jersey, May 11, 1929 (Rusling). Stragglers are passing through as late as the middle of June. The nest is usually placed in the heart of an alder thicket from two to four feet from the ground. There is but one brood, local egg dates concentrated in the middle two weeks of June with extremes June 12 and July 9. Southbound migrants have been recorded as early as the second week in August, and banding records show the height of the autumn flight to be late in this month or very early in September. The two latest unquestionable records before me are: one collected

at Mount Sinai, Long Island, September 16, 1907 (R. Murphy); a specimen killed striking the Statue of Liberty, September 26, 1889. There are many September sight identifications but I omit these due to the great likelihood of error.

Least Flycatcher

Empidonax minimus (W. M. and S. F. Baird)

This smallest of our flycatchers is a common summer resident over the larger part of our rural districts. It is partial to very open woodlands, orchards, shade trees around farm houses, and occasionally is found nesting even in village parks and streets. While the species does not object to the proximity of man, it evidently does object to too much construction and confusion and has steadily decreased as a breeding bird around New York City and its crowded suburbs. It still breeds commonly over most of the country districts of Rockland and Westchester Counties. In New Jersey it is a common summer resident in Sussex, Warren, Morris and Passaic Counties, decreasing progressively as one approaches the heavily populated suburban areas to the east. Old reports indicate that the bird was formerly not uncommon as a breeder along the north shore of Long Island, but to-day it is decidedly rare as a breeding bird in this section. Excluding the south shores of Nassau and Suffolk Counties where the Chebec is always astonishingly rare, it is common on migrations wherever there are trees and tall bushes.

The Least Flycatcher is the earliest of its genus to arrive in the spring, once reaching Bronx County as early as April 21, 1880 (Bicknell). May 5 is, however, a more normal arrival date, with the second and third weeks of this month producing the peak of abundance for the northward flight. At this time it is often possible to see several dozen in a day. Stragglers are passing through up to the first week of June. The nest is generally placed in a sapling eight to twenty feet from the ground. There is but one brood, local egg dates ranging

from May 27 to June 24. In the fall flycatchers of the genus *Empidonax* occur commonly from early August to early October, and occasionally at the peak of these flights in late August and early September several dozen may be seen in a day in the rural districts of Westchester County and New Jersey. As Griscom has pointed out, while positive identifications are ordinarily impossible there is every reason to believe that the great majority of migrants belong to this species. Mrs. Mary Beals has banded Least Flycatchers in Queens County up to September 18. Bicknell collected one in Bronx County, October 4, 1881. *Empidonax* Flycatchers have been seen by very competent observers as late as October 21, 25 and 30 and while these observers have suspected the birds of being Chebecs, they have not claimed a positive identification on any of these abnormal dates. An *Empidonax* Flycatcher was seen in New Rochelle, Westchester County, December 21 and 25, 1940, but attempts to collect the bird were unsuccessful (Bull and Friedle).

Eastern Wood Pewee

Myiochanes virens (Linnaeus)

Though the Wood Pewee prefers deep forests where the trees are tall, it occurs commonly in open woodlands, and regularly even in orchards, parks and in the large shade trees of village streets. Over the larger part of our region it is a common summer resident. For some reason it is locally rare as a breeder in apparently suitable habitat in many parts of Suffolk County. The species is slowly decreasing as a summer resident in the ever expanding metropolitan area, yet a few pairs still nest within the New York City limits. Wherever there are trees it is a common transient visitant, but it is naturally uncommon on migrations in such obviously unsuitable places as along the outer strip of Long Island.

The Wood Pewee has been seen at Orient, Long Island, on the remarkable date of April 30, 1913 (Latham), and a dozen

others have been seen at widely separated points during the first week of May. The species is ordinarily, however, one of our latest spring arrivals and is seldom recorded before May 12. The height of the northward movement is rarely reached before the last ten days of May, and at this season I have recorded as many as twenty-eight Wood Pewees in a vigorous day of birding. Migrants are passing through up to June 10. The lichen-covered nest is saddled on a branch from six to fifty feet from the ground. In our region there is probably but one brood, local egg dates ranging from June 6 to July 13. Southbound birds have been recorded as early as August 12, but the peak of the fall flight does not come until the end of this month or the first week in September. After September 20 the Wood Pewee is a very rare bird. Individuals have been seen in Central Park as late as October 29, 1927 (Watson and DuMont), in Bronx County as late as October 28, 1923. (Mathews and F. Allan), and there is an astonishingly abnormal record of a specimen collected near New Rochelle on December 13, 1900 (L. McCormick).

Olive-sided Flycatcher

Nuttallornis mesoleucus (Lichtenstein)

The Olive-sided Flycatcher is partial to the tall trees of damp woodlands, especially to those along the borders of swamps, ponds and streams. It generally selects the tallest twig as a perch, is surprisingly silent during migrations and is therefore overlooked by the majority of field observers. The species is a regular, though uncommon, late spring and early fall transient in the Hudson River Valley, but elsewhere in our region it is much scarcer. As might be expected the bird is extremely rare along the south shore of Nassau and Suffolk Counties, and on the outer strip is known only as a very rare late August and early September transient.

The Olive-sided Flycatcher is one of the last migrants to pass through in the spring. The earliest reliable record before

me is from Central Park, May 10, 1922 (Griscom). The species is most regularly recorded between May 22 and June 5, and migrants are infrequently passing through up to the middle of this latter month. On the other hand, in the fall it is one of our earliest migrants. The species regularly arrives in mid-August, once in Central Park as early as August 2, 1937 (Carleton). The peak of the southward movement comes during the last week in this month when the species is locally at maximum abundance for the entire year. Even at this season, however, one seldom sees more than one Olive-sided Flycatcher in a day and a record of more than six is purely casual. After September 15 the species is a rarity. One individual was carefully studied in Central Park on October 2, 1928 (DuMont). Latham sent Griscom dates for the Orient region, Long Island, ranging from September 14, 1913, to October 16, 1920. Griscom published these records but added, "The fall dates are just a month later than normal; the October record, if correct, is casual and unprecedented."

ALAUDIDAE: LARKS

Skylark

Alauda arvensis arvensis Linnaeus

Doctor Chapman, in his "Handbook of Birds of Eastern North America" (1932), gives the following excellent, concise account of this species, "The Skylark has been introduced several times in this country. In 1887 a small colony had become established near Flatbush, Long Island, where a nest with young was found. (See Dutcher, *The Auk*, 1888, p. 180.) After a supposed extinction a singing bird and nest were observed in July, 1895. (See Proctor, *The Auk*, 1895, p. 390.) According to Braislin (*Abst. Proc. Linn. Soc.*, 17, 1907, p. 76) the bird was still present in Flatbush where it could be heard singing from March to October, but Griscom states that the

haunts of this colony were destroyed by building and the species has not been observed since 1913."

Hoyt's Horned Lark

Otocoris alpestris hoyti Bishop

Specimens of Hoyt's Horned Lark have been collected on Shelter Island, February 7, 1887, April 26, 1893, and March 7, 1893 (Dwight and Worthington). It is possible that a very critical study of the Horned Larks occurring in our region will reveal that this subspecies is by no means a rarity.

Northern Horned Lark

Otocoris alpestris alpestris (Linnaeus)

The Horned Lark is essentially a bird of the outer beaches and the great coastal meadows. It is indelibly associated in my mind with the south shore of Long Island where it is a common to abundant winter visitant. It occurs much less frequently and in fewer numbers along the north shore west of the Orient Peninsula and on the extensive fields and plains in the interior of Nassau and Suffolk Counties. In the remainder of our portion of New York State the bird is found chiefly on the south shore of Staten Island, along the Sound, on the Van Cortlandt Parade Grounds and on the larger golf courses. In all these localities, especially in the ones away from salt water, it is usually rare in winter and is known principally as a November transient. In New Jersey the species is a common winter visitant all along the coast, and on the salt meadows around Newark Bay and at the mouth of the Raritan River. It becomes progressively less common away from the tidal marshes and is ordinarily only an uncommon November and late February transient throughout the interior.

The Horned Lark has been recorded at Orient, Long Island, as early as September 21, 1922 (Latham), at Oak Island Beach, Long Island, as early as October 1, 1939 (Mayer and

Rose), and in Bronx County as early as October 7, 1928 (Kuerzi), but the species seldom arrives before late in this latter month and is never very common until the first week in November. During November inland observers have their best chance of recording this bird. The peak of abundance for the entire year comes in late November and early December when flocks of several hundred are of regular occurrence along the coastal strip. Numbers ordinarily fall off in December, but the species remains as a common winter resident near the coast. In late February there are often indications of a return flight, and the species is again regularly recorded in the interior. By the end of March most of our Horned Larks have left for their northern breeding grounds, but small groups irregularly linger into April, and the species has remained at Orient Point, Long Island, as late as May 3, 1914 (Latham).

Prairie Horned Lark

Otocoris alpestris praticola Henshaw

So many reports of the Prairie Horned Lark are so absolutely worthless that in summing up information for the following analysis I have rejected all sight identifications unless made by experienced and careful observers and accompanied by a satisfactory account of the observation. I state unequivocally that inexperienced or careless observers all too frequently call pale female or immature Horned Larks, Prairie Horned Larks.

This species has unquestionably increased in the New York City region in the last twenty years. Griscom, writing twenty years ago, stated, "There is no doubt that the Prairie Horned Lark is a rare bird in this region, and there is no reason to suppose that it breeds or ever did breed anywhere except in northern New Jersey." Ten years ago the species began to appear more and more regularly, especially along the south shore of Long Island. John Mayer found the bird nesting on

the golf course at Idlewild in the spring and summer of 1936. Since then the Prairie Horned Lark has spread eastward on Long Island. It is apparently partial to open country where the grass is very short. Thus golf courses, filled-in areas, sandy fields, causeways and upland pastures produce most of our breeding records. Ten or more pairs now nest along the Jones Beach Parkways, one pair as far east along the outer strip as Oak Island Beach, another as far west on the Meadowbrook Causeway as Freeport. The species has also been found nesting in recent years at several points around Jamaica Bay, at Hewlett, Old Westbury, Sunken Meadow Park, Mineola, Flushing, Astoria, East Hampton, Gardiner's Island, Montauk and Dyker Heights.

On Staten Island the bird has been found breeding at Oakwood Beach and Miller Field. In Bronx, Rockland and Westchester Counties the Prairie Horned Lark is a decidedly rare visitor at any season and is most frequently recorded in November and late February. As it nests in upland pastures to the northward in Dutchess County and in Connecticut and shows signs of increasing there, it would not be surprising if pairs were soon found nesting in similar habitat in northern Westchester County. For our section of New Jersey, Griscom mentioned a few pairs breeding along the high ridge between Newton and Johnsonburg, Sussex County, the first nest collected there in May, 1893. Observers in recent years have apparently neglected to search thoroughly this locality but have seen spotted young just to the northeast between Monroe and Augusta. The species was found nesting near Lamington in 1929, at South Plainfield in 1937 and on the Newark meadows in 1938. Birds have recently been seen at many points throughout the state in summer, and further search may well reveal more nesting localities.

In most sections where the bird does not breed it is very rare and is known chiefly as an accidental late fall and winter visitant. Most major localities, however, now have records

for every month in the year. The nest is a mere cup of grass placed on the ground. Locally there seem to be one or two broods, egg dates ranging from February 28 to July 18.

HIRUNDINIDAE: SWALLOWS

Tree Swallow

Iridoprocne bicolor (Vieillot)

This is the first of our swallows to arrive in the spring, the last to leave in the fall and the only one that has been recorded during every week in the year. Over the greater part of the New York City region it is known only as a common to abundant transient visitant. The breeding population for our portion of New York State is very limited, the large majority of pairs being sprinkled in northern Rockland County and on the western third of Long Island. Even in these localities, however, it is considered only a rare local summer resident. A pair or two still nest in extreme northern Westchester County. Since 1932 a few pairs have bred in the houses placed around the Jones Beach pond in Nassau County, and in 1941 four pairs bred in boxes placed around Jamaica Bay. In 1938 a pair bred in Bronx County. In New Jersey the species is surprisingly uncommon as a breeder when one considers the apparently ideal habitat in the north-western sections. It nests regularly at Troy Meadows and Culvers Lake and is found nesting sporadically over widely scattered districts in Sussex, Warren, Morris, Passaic and Essex Counties.

The Tree Swallow generally arrives a week or more earlier on Long Island than in the highlands of the interior. In very mild seasons northbound flocks have been recorded as early as February 16, but the species seldom arrives before mid-March and is never common until early in April. The peak of the spring flight comes during the first week in May, and stragglers are passing through up to the middle of June.

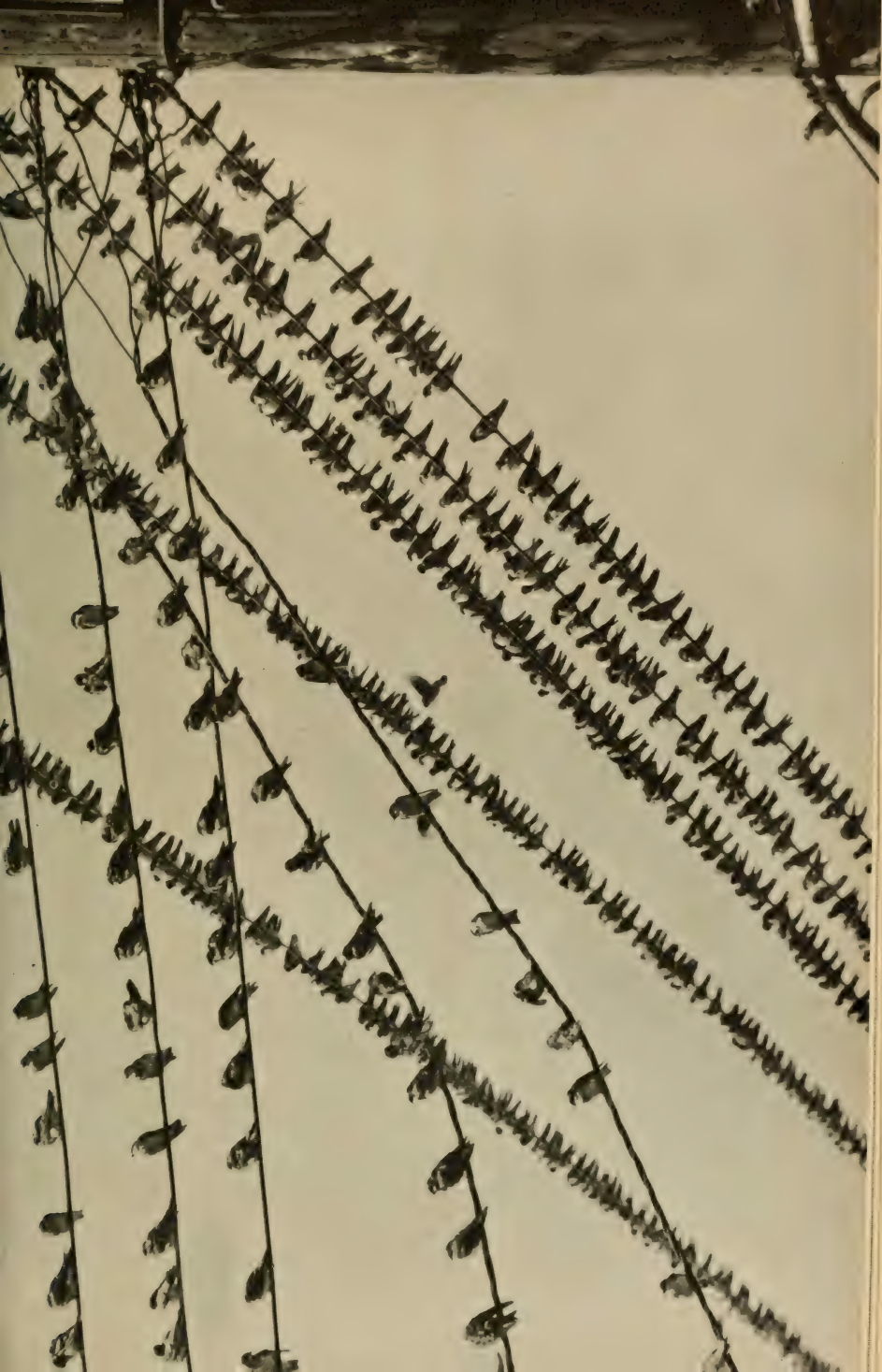
The nest is placed in a hollow post, in a cavity of a tree, or in a bird box from four to thirty feet from the ground. There is but one brood, local egg dates ranging from April 28 to June 19. Southbound flocks appear as early as the first week in July, and migration is in full swing by the end of this month. As summer progresses the majority of birds edge out to the coast, and by the end of August and early September flocks of many thousands are regularly found over the great brackish meadows. The birds frequent beds of bayberry to feast on the waxy coating of the seeds. Along the coast large flocks are regularly found up to the middle of October, and small flocks regularly linger into November. Inland the species is progressively less common after September, is decidedly rare by November and is purely fortuitous in winter. A small flock actually remained around Oradell, New Jersey, during the winter of 1940-1941. On the south shore of Long Island there are now dozens of records for December, a few for January, and on several occasions flocks have successfully passed the entire winter.

Thousands upon thousands of Tree Swallows wintering in our southern states were killed during the freak winter of 1939-40. The following summer the breeding population over the larger part of the northeast was reported as far below normal and when autumn came very large southbound flocks were seen by only a few observers.

Bank Swallow

Riparia riparia riparia (Linnaeus)

This smallest of our swallows was well named as it nests only in sandy banks. Its distribution as a breeding bird in our region, therefore, depends to a large extent on the location of unmolested sand banks. Griscom called it a common summer resident along the south shore of Long Island, but to-day it is very rare and local as a breeding bird there. A few pairs still nest on Lloyd's Neck and Eaton's Neck on the north



shore of Suffolk County. The majority of nesting Bank Swallows for the entire New York City region is, however, concentrated around Great Peconic, Little Peconic and Gardiner's Bays at the extreme eastern end of Long Island. Astonishingly few pairs now nest in Rockland and Westchester Counties. In New Jersey the species nests fairly regularly where sand banks are left undisturbed. Unfortunately man's interference continues to discourage the birds from breeding locally. Over the larger part of our region the Bank Swallow is known only during migrations. It is a common transient visitant along the coast and in the Hudson River valley but is progressively less common westward in New Jersey.

The Bank Swallow has been recorded in Westchester County as early as April 2, 1925 (Coles), but it is usually April 20 before the species arrives and early May before the peak of the northward flight reaches our latitude. Stragglers are often passing through until the middle of June after local residents have settled down to breed. The birds ordinarily nest in definite colonies consisting of from one to ten dozen pairs. The nest is placed in a cavity dug in a sand bank. Locally there is probably but one brood, egg dates before me ranging from May 22 to June 26. During July vagrants show up from time to time in localities where the species definitely does not breed. Southbound flocks regularly arrive in mid-August, and the peak of abundance for the entire year comes during the last week in this month. At this season along the coast one will occasionally see over one hundred Bank Swallows in a flock. On the other hand, in most localities even at the peak of abundance one seldom sees over two dozen individuals of this species on any one day. After September 10 the Bank Swallow is a very rare bird. There are two abnormal records: one for Bronx County, October 11, 1891 (Bicknell); the other, Smithtown, Long Island, October 11, 1938 (Cruickshank).

Rough-winged Swallow

Stelgidopteryx ruficollis serripennis (Audubon)

Whereas the Rough-winged Swallow has decreased somewhat during the last decade in the immediate vicinity of the crowded metropolitan area, it has increased over the region as a whole and is much more common to-day than it was when Griscom wrote his book. The distribution of the species seems to be partly correlated with the presence of suitable bridges, cut banks, dams and similar structures whose cracks offer favorable nesting sites. To-day it is much more common in New Jersey than elsewhere in our region. Nesting sites are scattered throughout the State wherever the required conditions exist. The bird is a very rare breeder on Staten Island. It now nests fairly commonly in Bronx, Rockland and Westchester Counties, especially along the Hudson River and around the larger reservoirs. Long Island is by far the poorest major locality for the Rough-winged Swallow. There are breeding pairs or small groups sprinkled along the bluffs of the Sound in Queens, Nassau and Suffolk Counties. A few pairs nest along the periphery of the eastern end to Montauk Point, and the breeding locality near Georgica Pond is the only one I know of for the entire south shore. The bird is known principally as an uncommon to rare transient visitant elsewhere.

The Rough-winged Swallow has been recorded at Ridgewood, New Jersey, as early as March 31, 1935 (L. Walsh); at Mattituck, Long Island, as early as April 3, 1931 (Latham); and on two occasions in Bronx and Westchester Counties as early as April 5. April 15 is, however, a much more normal arrival date, with the first week in May bringing the peak of abundance for the entire year. At this season I have seen as many as thirty-three individuals in a day around Kensico Lake in Westchester County. Stragglers are infrequently recorded as late as the first week of June. The bird nests in

holes in dirt banks or in cracks of bridges, dams and buildings. There is probably only one brood, the few egg dates before me ranging from May 4 to July 4. Immediately after the breeding season most of our Rough-winged Swallows depart for the south, and it is exceptional to see one after mid-August. I find numerous reports of *flocks* in September, but all such reports are by inexperienced observers and unquestionably refer to immature Bank or Tree Swallows. The latest date given by Griscom was from Bronx County, September 9, 1877 (E. Bicknell). I find sight records by very reliable and experienced observers as late as September 6, 1935 (A. Helme); September 10, 1926 (C. Urner); October 2, 1935 (Latham). Urner, in presenting his September observations, stated "these dates are tentatively offered, awaiting the collection of a September specimen."

Barn Swallow

Hirundo erythrogaster Boddaert

The Barn Swallow is by far the most widely distributed and most generally known member of its family in the New York City region. Over the larger part of our area it is a common summer resident and an abundant transient, becoming rare to unknown as a breeding species in the thickly settled suburban areas, as well as in the uninhabited wilderness country where there are no buildings in which to nest. In other words it is essentially a bird of the rural districts where farmlands and farm buildings offer the preferred conditions. A few pairs still nest within the New York City limits, but the number decreases annually.

The Barn Swallow has been recorded at Westbury, Long Island, as early as March 15, 1936 (J. Mathews), and on three other occasions on Long Island during the last half of this month, but April 15 is a much more normal arrival date. The peak of the northward movement comes in late April, at which time one may often record over two hundred in-

dividuals in a day. Migrants are passing through up to the opening days of June. The bird nests singly or in groups up to forty in barns, sheds, under bridges, very rarely on the shelf of a cliff. Locally there are probably but two broods, egg dates concentrated in the last half of May, with extremes May 12 and July 7. Southbound Barn Swallows are definitely passing through our region by the middle of July. Numbers progressively increase during August, and by the end of this month the bird is at maximum abundance for the entire year. At this time concentrations of several hundred are periodically encountered. Thirty or forty is, however, a more normal daily count. After the middle of September the species rapidly becomes scarce, and only stragglers remain to the end of October. I find but sixteen November records and one December record, the three latest from Long Island: Long Beach, November 26, 1918 (Janvrin); Jones Beach, November 26, 1933 (Vogt); and December 19, 1937 (Cruickshank).

Northern Cliff Swallow

Petrochelidon albifrons albifrons (Rafinesque)

The Cliff or Eaves Swallow is locally the rarest member of its family. Formerly a fairly common and widely distributed species in the New York City region, it has become practically extirpated as a summer resident and is progressively decreasing as a transient visitant. This decrease has been attributed to the introduction of the English Sparrow whose pugnacious attacks upon the swallows themselves and destructive investigations of the nests could not be coped with. The Cliff Swallow has not been known to nest on Long Island since 1904. Throughout the rest of our section of New York State the species has virtually been extirpated as a summer resident. A pair or two irregularly nest in extreme northeastern Westchester County. In New Jersey a few colonies still exist in Warren, Sussex, Passaic, Somerset and

Morris Counties, but present indications are that these sites are becoming fewer and the size of the colonies smaller. If farmers would make nesting conditions more favorable by erecting narrow shelves under the eaves of barns it is probable that with the recent decrease in the English Sparrow population these beautiful swallows might be enticed to reestablish themselves. Over the larger part of the New York City region the Cliff Swallow is now known only as an uncommon to rare transient. In most localities it is astonishingly rare, and a record of a few individuals each year is considered good luck. Flocks of from twenty to thirty are unusual.

The Cliff Swallow has been recorded near Brookhaven, Long Island, as early as April 7, 1936 (Allyn, Berliner and Whitman), and in Westchester County as early as April 17, 1936 (Bagg and Bull). The species ordinarily does not arrive until the last days of April, and what might apologetically be called the spring peak comes during the first week in May. Stragglers are infrequently recorded up to the second week in June. In our region the bird invariably places its mud or clay nest under the eaves of a building. There is but one brood, local egg dates ranging from May 16 to June 29. An individual recorded at Idlewild, Long Island, on July 11, 1931 (Mayer), might represent a vagrant rather than an early fall migrant. Southbound birds ordinarily do not show up until the following month. The large majority of fall records comes during the middle two weeks of August. After the end of this month the bird is exceedingly rare, the latest date before me from Long Island, October 11 ("Birds of the New York City Region").

Purple Martin

Progne subis subis (Linnaeus)

Since the introduction of the English Sparrow and the Starling in our region this largest and noisiest of our swal-

lows has been on the decline. It no longer nests anywhere near New York City. Some fourteen colonies are scattered over Suffolk County, Long Island, most of them at the eastern end. In the rest of our portion of New York State there are apparently but two surviving colonies: one at Seaford, Nassau County, the other at Rye, Westchester County. The species bred on Staten Island in 1917. In New Jersey colonies are thinly sprinkled over Sussex, Warren, Monmouth and Morris Counties. Every effort should be made to encourage this attractive species to make sure the day will never come when it has been completely extirpated from our region. The astonishing thing about the Purple Martin is its rarity as a transient. Apparently the birds migrate at a great altitude and pass over unnoticed as there are numerous colonies existing to the north of us. Everywhere in our region where the bird does not breed it is known only as a rare spring and an uncommon to rare fall transient.

The Purple Martin has been seen at Rye, Westchester County, as early as April 1, 1933 (Oboiko *et al.*), and there are several other dates for the first week in this month. April 15 is, however, a much more normal date of arrival, with stragglers infrequently passing through up to June 13. The birds generally nest in colonies of from five to sixty pairs. They use large, many-chambered bird houses, gourds suspended from tall poles, rarely cavities in a tree. There is but one brood, local egg dates concentrated in the last half of May, with extremes May 18 and June 14. Southbound Martins occasionally arrive in our region as early as August 4, and the species reaches a fall peak late in this month. The concentrations of thousands of Martins reported from more southerly regions are unknown here. In fact away from nesting localities, even at the height of the fall migration, one considers oneself lucky to see over four or five Martins in a day, and migrating flocks of over one hundred individuals are absolutely fortuitous. After September 10 the Purple

Martin is a very rare bird, the latest date before me being from Manorville, Long Island, October 6, 1940 (Raynor).

CORVIDAE: CROWS AND JAYS

Blue Jay

Cyanocitta cristata cristata (Linnaeus)

This uproarious but handsome bird is an adaptable species, not only nesting in the heart of the climax woodlands in the mountains of northern New Jersey but even in parks in Bronx, Brooklyn, Queens and Richmond Counties, and in yards throughout the suburban sections of the metropolis. It is a common permanent resident over the larger part of our region, being absent as a breeding bird only along the coastal strip of Long Island, on Gardiner's Island, over a large portion of the Orient Peninsula and in the too heavily settled sections of our cities. On the coastal strip of Long Island it is known as an uncommon transient visitant and is purely casual at all other times. Elsewhere in our region it is common to abundant during migrations.

In late August there are usually indications that Blue Jays are on the move, but it is not until the first light frost in late September that any widespread migration sets in. The flights increase as September progresses, and by the end of the month and the first half of October the species is at its peak of abundance for the entire year. At this season it is not unusual to see dozens of Blue Jays in a day, and on several occasions in New Jersey, Westchester County and on Long Island I have seen remarkable concentrations of from one to four hundred individuals. By November the migrating flocks have usually passed on to the south and our winter population is established. From time to time throughout the winter, however, there are local movements as wintering birds shift from areas where the food supply of acorns and beechnuts has given out. The spring flight is confined chiefly



to the hills of New Jersey and Rockland County. Singularly, it takes place in late April and May after most of the local residents have built nests. Stragglers are occasionally found passing through as late as June 6. The nest is usually placed near the trunk of a tree, most frequently in a conifer, from five to fifty feet from the ground. There is but one brood, local egg dates concentrated in the last half of April, with extremes April 10 and June 22.

American Magpie

Pica pica hudsonia (Sabine)

There was a light invasion of this species in the eastern United States in the autumn of 1935. One bird was discovered in the Van Cortlandt marsh in Bronx County, October 31 (Sialis Bird Club). It was seen subsequently by numerous observers and remained until December 22 (Cruickshank). I also saw a single individual of this species flying over Rye, Westchester County, on December 21. A specimen was collected at Bear Mountain on November 14, 1935 (W. Carr). The only record for New Jersey is a report of one seen at Englewood, February 12, 1936 (Norse and Cantor).

Northern Raven

Corvus corax principalis Ridgway

This largest of our passeriformes has probably been extirpated as a breeding bird in the New York City region, although it is conceivable that a pair or two might still nest in the wildest sections of northwestern New Jersey. The species was believed to be extirpated from our section of New Jersey after 1881. Mr. Justus Von Lengerke saw two birds near Culver's Gap, Sussex County, on September 21, 1918, and secured one. During the past few years members of the Uner Ornithological Club have seen one or more Ravens each October while studying the hawk migrations along the ridges of northwestern New Jersey. This checks

with the observations of Maurice Broun at Hawk Mountain, Pennsylvania, who finds the Raven to be a rare but regular fall migrant there. I find only two local spring records: Troy Meadows, April 19, 1931 (Carter); Waywayanda Mountain, May 2, 1934 (Helmuth).

One hundred years ago Giraud considered the Raven an occasional visitor to Long Island, the last specimens collected in 1836 and 1848. Single birds carefully studied at Georgica Pond, Long Island (Helmuth), and New Rochelle, Westchester County (Bull and Young), on December 28, 1941, possibly indicate a light coastal movement.

Eastern Crow

Corvus brachyrhynchos brachyrhynchos Brehm

This well known bird is a common permanent resident over the larger part of our region, even nesting in trees at the edges of the great coastal marshes and on the outer strip of Long Island. Each winter it decreases in the higher portions of New Jersey and northern Westchester County but increases near the coast. Moreover, the species is decidedly migratory. With the coming of our first heavy frosts in early October a definite southward movement of crows begins and continues throughout November. Each night from late summer to early spring crows gather in great roosts, and during the coldest weather in January some of these local roosts consist of as many as thirty thousand or more birds. We have three major roosts on Long Island, all in Suffolk County. In winter the westernmost of these holds all of the crows from Queens, Nassau and the western sixth of Suffolk Counties and even includes birds coming across the Sound each night from points in Bronx and Westchester Counties. In Westchester there are two roosts, the southernmost near the Kensico Reservoir. Our section of New Jersey has three or more big roosts, the largest in Hunterdon County. I purposely do not give detailed information as to the exact localities and

numbers of birds in our various roosts, as such information might only aid those who delight in the wholesale slaughter of the much-maligned crow. With the coming of the first heavy thaw in February a return flight sets in. This northward movement is very variable depending upon weather conditions, but it is always long and drawn out, extending at times into May. The Crow nests in either deciduous or coniferous trees from four to sixty feet from the ground. There is but one brood, local egg dates concentrated between mid-April and mid-May, with extremes March 3 and June 12.

Fish Crow

Corvus ossifragus Wilson

As a breeding species this small crow is restricted to the seaboard and to the lower valleys of our rivers, yet, contrary to what one might be led to believe, it is decidedly uncommon as a breeding bird along the outer strip of Long Island and near the outer beaches. Over the larger part of Long Island it is a locally common permanent resident, breeding at scattered points from Brooklyn to Montauk. The bird is most common and most widely distributed during migrations, and the large majority of wintering birds are concentrated along the Sound between Astoria and Roslyn. I have recorded almost one hundred Fish Crows flying into our westernmost crow roost on Long Island during mid-winter, but it must be remembered that this roost attracts all of the crows from both shores of the East River and the western end of the Sound and consequently represents a large percentage of individuals of this species wintering in our region. In the remainder of our section of New York State the Fish Crow is a fairly common permanent resident, the one to four dozen wintering birds concentrating along the Sound between Hunt's Point and New Rochelle and on the marshes along the south shore of Staten Island. In our section of New Jersey the species has been found definitely breeding only in the eastern half of



the state. It becomes progressively less common away from the immediate vicinity of the Hudson River Valley and is very uncommon to rare in the inland hill country. A few birds are occasionally found wintering near Newark Meadows, Troy Meadows, South Plainfield and at the mouth of the Raritan River.

Though a few Fish Crows are permanent residents, in our region the species is noticeably migratory. The first northward flight usually comes during the second and third weeks in March. The peak of the spring migration is in early April and stragglers are often recorded up to early June. The bird places its nest either in a conifer or deciduous tree from fifteen to fifty feet from the ground. There is but one brood, local egg dates concentrated in May, with extremes April 27 and June 5. All through August Fish Crows are on the move, and by early fall the species becomes fairly common in many coastal areas where it is rare as a breeding bird. The major part of our Fish Crow population has ordinarily departed by mid-November, leaving but a small group of birds to brave the winter.

PARIDAE: TITMICE

Black-capped Chickadee

Penthestes atricapillus atricapillus (Linnaeus)

This tamest of all our local birds, though principally a dweller of forests and open woodlands, occurs wherever there are trees and tall bushes. It is a common permanent resident over the larger part of our region. It no longer nests in Central Park. It occurs there as a fairly common fall transient, and is astonishingly rare at all other times. It is gradually disappearing as a summer resident all around the metropolis and in the more thickly settled sections of the suburbs. On the coastal strip of Long Island the bird is uncommon in fall, rare in winter and purely casual in spring.

Throughout September there are indications that Chickadees are on the move, but it is not until the first light frost in this month that any widespread wave arrives from the north. This fall movement continues into December by which time the winter population is virtually established. All through the winter the Chickadee is one of the most characteristic birds of our woods, parks and suburban yards and is usually the most common species around bird feeding stations. At this season one will often see several dozen individuals in a vigorous day of birding. The local winter population for any one year is, however, subject to large variations and occasionally the species for no apparent reason is locally rare. With the coming of March the birds commence to thin out and by the third week in April most of the winter visitants have departed, and most local breeders have retreated into the woods and established territories. During the nesting season the Chickadee loses its cheerful, confiding ways, becomes secretive and quiet and is ordinarily overlooked. The nest is placed in a natural hollow of a tree, in a cavity excavated by the birds themselves, or in a bird house from three to twenty feet from the ground. There are usually two broods, local egg dates concentrated in May, with extremes April 21 and June 27.

Carolina Chickadee

Penthestes carolinensis carolinensis (Audubon)

This southern species reaches its northern limit of distribution in our region. It is generally assumed that birds which breed south of the Raritan River are Carolina Chickadees and those from the north of the River are Black-caps. There are indications that the dividing line is not quite so sharp. Specimens collected on both banks of the Raritan seem to be intermediate both in color and measurements and in a mated pair collected by the late W. De Witt Miller

at Old Bridge, N. J., the characters of *atricapillus* predominate in the male and in the female those of *carolinensis*.

The Carolina Chickadee is considered a permanent resident, but there are more than two dozen apparently reliable sight identifications for Essex County, Union County, and northern Middlesex and Somerset Counties. It is not known whether these were strays from farther south or whether they indicate a broader zone of intergradation than was previously realized. A careful study of the border between the two species is one of the major ornithological problems in our region. Where does the dividing line between the two species run? Are they sharply divided in the border zone or do they intergrade? Is there a farm belt without chickadees between the ranges of the two species, and are color and song characters correlated in intermediate individuals? Such are the questions that will have to be answered.

Hudsonian Chickadee

Penthestes hudsonicus hudsonicus (J. R. Forster)

A specimen of this subspecies from the northwest, captured at Ramsey, New Jersey, on November 1, 1913, by Charles R. Slight, is now in The American Museum of Natural History, (*The Auk*, 1920, Vol. 37, p. 593).

Acadian Chickadee

Penthestes hudsonicus littoralis (Bryant)

There was a marked invasion of Brown-capped Chickadees in the winter of 1916-17. All the specimens taken in the east were found to belong to the then recently described Labrador Chickadee, *Penthestes hudsonicus nigricans*. Griscom naturally also accredited all sight identifications to this race. Since then Bangs has shown this supposed race, *nigricans*, to be only *Penthestes hudsonicus littoralis*, in first winter plumage. I therefore now accredit all records accordingly.

There are two sight identifications for Long Island: Hewlett, November 13, 1916 (Bicknell); Roslyn, December 2, 1916 (G. Thayer). For Bronx and Westchester Counties I find sight records of one in Van Cortlandt Park, October 29, 1916 (C. Lewis), and a maximum of five near New Rochelle Lake, from November 25 to December 30, 1916 (R. Coles). Four birds were discovered in the Moravian Cemetery on Staten Island, December 2, 1916 (Decker). As many as five were subsequently seen there by numerous observers, one remaining as late as February. As a matter of record Griscom collected a specimen on January 14, 1917. From our section of New Jersey I find the following records: two discovered near Scotch Plains, December 17, 1916 (W. Miller). One was collected on December 31, and the other remained until January 28, 1917. Individuals were seen between Plainfield and Stirling, January 7, 1917 (W. Miller); between Summit and Westfield, February 4, 1917 (W. Miller and C. Rogers); at Englewood, December 23, 1916 (L. Walsh) and January 1, 1917 (C. Rogers).

As this goes to press, a flight of Acadian Chickadees has reached Massachusetts and a single bird has been recorded in Westchester County, December 28, 1941 (Thomas).

Tufted Titmouse

Baeolophus bicolor (Linnaeus)

This perky little bird so characteristic of the Carolinian Zone is partial to rich woodlands. It reaches the northern limit of its range in the New York City region. Wherever it breeds it is a permanent resident and, as is generally true of all permanent residents which reach the northern limit of their range here, it is subject to great variations, building up to be fairly common one decade, wiped out by an extremely severe winter the next. In recent years it has shown decided evidence of increasing and spreading a little farther north. To-day the Tufted Titmouse is a fairly common permanent

resident in the southeastern quarter of our section of New Jersey, and in this area one may expect to find from three to twelve individuals in a full day of birding. A 1938 Christmas census in Essex County lists the remarkable total of eighty-nine. Elsewhere in our portion of New Jersey the bird is practically confined to the river valleys and gets into the northwest sections only by wandering up these waterways. Several pairs are now established even as far north as Rockland and Orange Counties in New York State. The species is a very rare permanent resident on Staten Island. Singularly, the Tufted Titmouse is extremely uncommon east of the Hudson River. In recent years pairs have been found breeding in Bronx County near Pelham Bay and in Westchester County at New Rochelle, Purchase and Kensico. One hundred years ago Giraud considered the species common on Long Island. To-day in this region it is known only as a very rare visitor, less than four reports normally coming from this section each year. Over the larger part of the New York City region east of the Hudson River the species may be expected only as a rare possibility at any time of the year. The Tufted Titmouse usually nests in the cavity of a tree or in a bird box, seldom more than fifteen feet from the ground. Locally there is but one brood, egg dates ranging from May 4 to June 17.

SITTIDAE: NUTHATCHES

Northern White-breasted Nuthatch

Sitta carolinensis carolinensis Latham

In most localities where there are good stands of trees the White-breasted Nuthatch is a fairly common permanent resident. Throughout the winter it is one of our most common and most widely distributed birds, regularly leaving the depths of the woods and joining with Chickadees and Downy Woodpeckers about parks, suburban yards and bird feeding

stations. It is decidedly less common and less conspicuous as a breeding bird, the winter visitants departing northward at the approach of the nesting season, and most local breeders retiring into the seclusion of the woods. Everywhere along the southern and eastern parts of Long Island the species is always decidedly less common than elsewhere. In fact on the coastal strip and on the tips of the Orient and Montauk peninsulas, it is a rare September and October transient and is purely casual at any other time.

With the coming of the first light frost in September a few White-breasted Nuthatches arrive from the north. This fall movement becomes more pronounced in October and continues into mid-November by which time our winter population has ordinarily been established. During the winter one will often see as many as a dozen individuals in a day. On the other hand it is unusual to encounter over a pair or two in a day anywhere in our region during the breeding season. The spring flight, which extends from mid-April to mid-May, is so light that it is generally overlooked. Most of our local breeders have established territories long before this movement begins. The nest is placed in a cavity of a tree or in a bird box from one to fifty feet from the ground. There is but one brood, local egg dates concentrated in late April, with extremes April 15 and May 26.

Red-breasted Nuthatch

Sitta canadensis Linnaeus

This little Nuthatch from the Canadian Zone is particularly fond of conifers or mixed woods. Whereas it has been recorded in the New York City region during every month of the year it is essentially a transient visitant, at times wintering commonly along the coast. Its movements for any one year, however, are practically unpredictable. One year it will go virtually unrecorded while the next it will arrive

en masse in mid-August. Furthermore its numbers will usually vary greatly and its length of stay will seldom be the same two years in succession. In 1878 Bicknell witnessed a definite southbound flight in Bronx County as early as July 10 and by August 12 of that year the species was locally abundant. The same observer has records for July 1 to 5, 1886, July 18 and August 8, 1889. Doctor Chapman saw the species in Central Park during June and July, 1892, and there is an old record from Long Island for July 20 (Dutcher).

The most normal picture might be described as follows. Although flights as early as mid-August are by no means unusual, it is ordinarily not until the first light frost in late September that Red-breasted Nuthatches arrive from the north. This southward movement continues up to early December with the bulk of migrants passing through during the last half of October. During the fall the species is generally widely distributed over our region, the majority of individuals concentrating in areas where there are numerous conifers. One ordinarily considers himself fortunate to see one to six Red-breasted Nuthatches in a day, a count of several dozen being very unusual even at the peak of the southward flight. By Christmas the species usually becomes very scarce throughout the interior but along the coast, especially on the south shore of Long Island, even in the conifer beds on the outer strip, the bird regularly winters in small numbers. If there has been a southward flight in the fall, there is generally a return flight between April 10 and May 25, but this northward movement is always very light and frequently goes unrecorded. A few stragglers irregularly linger into the first week in June. On June 15, 1921, at Orient, Long Island, Roy Latham collected a bird in which the ovary contained the ruptured capsules from which the eggs had been developed. A mate was seen nearby, and there seems little doubt that this constitutes the only breeding record for the entire New York City region.

CERTHIIDAE: CREEPERS

Brown Creeper*Certhia familiaris americana* Bonaparte

The Brown Creeper, though a possibility during migrations in any locality, is seldom found far from a large stand of trees. It is quite evenly distributed over the entire New York City region and is principally known as a common transient visitant and a less common winter resident. On the outer strip of Long Island it is infrequently found from mid-September to mid-November, again in April, and is purely casual at all other times.

The Brown Creeper has been recorded as a rare but regular breeder in an elm swamp near Springdale, Sussex County, New Jersey (P. B. Philipp). Two adults with five young were seen near Summit, July 23, 1905 (H. Hans). There is certainly much suitable habitat in northwestern New Jersey where birds have been seen during the summer, and further investigations in this area will undoubtedly produce several breeding localities. A singing Creeper was found as far east in the state as Alpine, June 28, 1935 (Cantor), and it is possible that the bird was breeding. In our portion of New York State I find only one positive breeding record: a nest with young in the Van Cortlandt Park swamp in Bronx County on May 27, 1926 (Cruickshank). Kuerzi found, however, a singing bird at North Tarrytown as late as June 20 and in 1929 discovered several pairs breeding just north of our limits in a swamp east of Cold Spring, Putnam County. Singing birds have been seen in the highlands of Rockland County in summer, and the species has undoubtedly bred there. A pair summered in East Marion, Long Island, in 1923 and was thought to have nested there. One individual was seen in Orient on June 18, 1921, and its behavior suggested a breeding bird (Latham).

The Brown Creeper has arrived in Garden City, Long Island, as early as August 31, 1934 (J. T. Nichols), and there are several scattered records for the first week in September. The species ordinarily arrives in a marked wave around September 22 and builds up to the peak of abundance for the entire year between October 10 and 22 when it is sometimes possible to see from ten to twenty individuals in a day. By November 15 the winter population is usually established, and from then until early April a record of two to six individuals in a day is the maximum one may expect. With the coming of April a light return flight of Creepers sets in and continues throughout the month. There is a sprinkling of records for the first half of May, one for Central Park as late as May 21, 1917 (Hix). The status of the bird as a summer resident has already been discussed. The nest is placed under the loose bark of a tree in damp or flooded woodlands, usually less than twenty feet from the ground. There is but one brood, and whereas I can find no local egg dates it is evident that they come in May and June.

TROGLODYTIDAE: WRENS

House Wren

Troglodytes aedon aedon Vieillot

Over the larger part of the New York City region the House Wren is a common summer resident. Whereas it is partial to farms, estates, and thinly-populated suburban areas where man has erected suitable bird houses, it evidently cannot tolerate or survive in densely settled areas and has progressively decreased around the metropolis since the beginning of the current century. Nevertheless, a pair nested in Central Park as recently as 1935, and quite a few pairs still breed within the New York City limits. On Long Island the bird decreases as a summer resident eastward in Suffolk County and is known chiefly as a rare transient on the Orient

and Montauk peninsulas. Everywhere along the outer strip it is a very rare transient visitant, the majority of records grouped in late September and early October. Some House Wrens are not yet domesticated and nest in damp woodlands and tangled thickets far from any habitation.

The House Wren has been recorded in Bronx County as early as April 12, 1922 (P. Kessler), and April 13, 1921 (Kuerzi), but it is usually the last week in this month before the first widespread wave arrives. Maximum abundance for the entire year is reached during the first week in May, and at this season I have often recorded over two dozen individuals in a day. Migrants are passing through up to May 26, rarely as late as June 7. The bird nests in a variety of habitats and in an astonishing assortment of places ranging from natural cavities in trees to discarded shoes in a town dump. There are regularly two broods, sometimes three, local egg dates concentrated in the last two weeks of May, with extremes May 4 and July 19. After July the House Wren practically disappears from our suburban areas and retires into swampy thickets. There is a light fall flight from mid-August to mid-October. After the end of this latter month the bird is strictly accidental, yet I find the following very abnormal dates: Riverdale, Bronx County, December 21, 1930 (Cruikshank); Flushing, Queens County, December 26, 1936 (Queens County Bird Club), and December 26, 1938 (Fischer, Bernhardt and Sire); Allwood, New Jersey, January 3, 1931 (R. Clausen); West Caldwell, New Jersey, March 2, 1935 (E. Stearns); Orient, Long Island, December 18, 1929 (Latham).

Eastern Winter Wren

Nannus hiemalis hiemalis (Vieillot)

The Winter Wren, one of the smallest of our local birds, is an elusive species, seldom coming out from the concealment of brush heaps, rock-piled ravines, ragged banks of streams

and dense woodland thickets. Over the larger part of our region it is a regular but uncommon transient visitant and a very uncommon winter resident. On the coastal strip it is decidedly uncommon even during the fall migration and is extremely rare in winter and spring.

The Winter Wren regularly arrives from the north during the last ten days of September, once at Jones Beach, Long Island, as early as September 11, 1934 (Vogt). This southward movement continues until early December, with the bulk of birds passing through between October 20 and November 12. During exceptional flights I have recorded eleven Winter Wrens in a vigorous day of birding, but the days one sees more than two or three of these secretive birds anywhere in our region are few and far between. In winter the bird is decidedly uncommon and is most often found in damp sheltered wooded ravines and around the bushy thickets of warm coastal swamps. With the coming of March there is often evidence of a light return flight, yet the main spring movement is surprisingly late, extending from April 15 to May 10. The latest local date before me is from Waywayanda, New Jersey, May 31, 1926 (Griscom). The Winter Wren has been found singing throughout June just to the north of us in Putnam and Orange Counties, and has undoubtedly bred there. It has bred in the northeastern corner of Connecticut and consequently it would not be surprising if one or two pairs were some day found nesting in the mountains of northwestern New Jersey.

Bewick's Wren

Thryomanes bewicki bewicki (Audubon)

An accidental visitor. A single bird appeared in Central Park on April 10, 1928, but was not positively identified until April 20 (Miss Capen *et al.*). It sang freely during the early part of its stay, remained up to May 8 and was seen day after day by a score of competent observers, many of

whom were previously familiar with the species in life. After such thorough identification it would be ridiculous to relegate the bird to our hypothetical list.

Carolina Wren

Thryothorus ludovicianus ludovicianus (Latham)

The Carolina Wren is a permanent resident wherever it breeds. It reaches the northern limit of its range in the New York City region, however, and is consequently subject to great variations. Until the end of the nineteenth century it was resident on Staten Island and had bred once in Riverdale. Early in this century a northward movement took place. "A colony became established on the Palisades, another on Gardiner's Island, the bird bred sporadically on Long Island and at Plainfield and appeared elsewhere in the territory more frequently. The period of maximum abundance was reached about 1911. A sharp winter caused a decline in numbers, and while the colonies on the Palisades and Gardiner's Island survived, there was a marked decrease in records elsewhere. The record-breaking winter of 1917-18 completely exterminated the Carolina Wren throughout our territory, and it has been scarcely recorded since. It may confidently be expected to appear again in the future" (Griscom). Subsequently the species returned gradually, had just about reached its 1911 status when the severe winter of 1933-34 dealt another telling blow. The Carolina Wren is again struggling to re-establish itself, yet we may expect it to continue its chequered career, a career in our region quite similar to those of the Tufted Titmouse and the Cardinal.

At present the most accessible place to see and hear this lively Wren in our region is along the Palisades between George Washington Bridge and the Piermont marshes where I have recorded as many as five individuals on a day's walk. On Long Island the only regular nesting grounds are on the Orient peninsula, Shelter Island and Gardiner's Island. The

species has also nested in recent years at Woodmere and Idlewild. It would be ridiculous to list records for a bird that is subject to such abrupt and constant variations. Suffice it to say there are now numerous records for all months of the year from all major localities, as well as records for such out of the way places as Jones Beach and Fire Island. *The Carolina Wren is a rare possibility at any time of the year at any point in our region.* Naturally beyond our limits the bird progressively increases as one works southward in New Jersey. In spite of its local rarity as a breeding bird it is surprisingly adaptable, nesting at the base of the rugged Palisades, in wooded ravines, and occasionally even in suburban yards. The nest is placed in a variety of locations ranging from hollow stumps and bird boxes to old tin cans and the pockets of scarecrows. Locally there is probably but one brood, the few egg dates before me falling between April 27 and May 23.

Long-billed Marsh Wren

Telmatodytes palustris palustris (Wilson)

This well-named bird is strictly a dweller of the tall reed or dense cat-tail beds of our creeks, rivers, lakes and marshes. Away from these boggy haunts it is a rare bird, turning up only periodically during migrations. Naturally a species so meticulous about its habitat is very local and sporadic as a breeder. It nests commonly, sometimes abundantly, in most sections where the forementioned growth occurs in the New York City region. As these areas are destroyed the Long-billed Marsh Wren becomes rarer. It breeds less commonly in the lower tangled grasses of our salt marshes, yet many extensive stretches of such habitat particularly on both sides of the Sound are strangely without a nesting pair. As might be expected the species is very local inland.

Small groups of Long-billed Marsh Wrens have been heard singing in our region as early as April 19, and there probably is an occasional light flight this early. The large majority,

however, arrive much later, the first widespread wave coming early in May and the bulk of the population not until the last half of this month. The birds breed in colonies, their spherical nests of grasses and plant-down ordinarily suspended in cat-tails a few feet above the water. There are two, possibly three, broods, local egg dates before me concentrated in June, with extremes May 22 and July 26. The average breeding colony consists of from five to twenty pairs. The late Charles A. Urner informed me, however, that in the days before the extensive cat-tail beds of the Newark meadows were destroyed he frequently heard over one hundred birds giving their lively musical gurgitations during a single trip. Large numbers still breed in the Hackensack River marshes and over one hundred pairs now nest in Troy Meadows, New Jersey. After the nesting season the Long-billed Marsh Wren becomes more secretive and quiet and is ordinarily overlooked. I can find no evidence of a fall flight. The local population gradually departs before the end of October, leaving only a few hardy individuals to pass the winter in some of the large open coastal marshes. The size of this winter population depends to a large extent on the severity of this season. After the first heavy freeze the species is purely casual inland.

Short-billed Marsh Wren

Cistothorus stellaris (Naumann)

It is quite possible that this little wren is much more common than is generally supposed as it is exceedingly mouse-like, usually creeping in the dense tangles of grasses and sedges in damp meadows where the majority of observers unfortunately seldom bother to explore. It is, however, very meticulous about its breeding requirements, immediately deserting a nesting site if the ground becomes too dry through draining or too wet through flooding. At present it must be considered a very uncommon to rare local summer resident. There are nesting localities very thinly sprinkled over our

section of New Jersey, through Rockland and northern Westchester Counties and along the south shore of Long Island from Idlewild to Mastic. Until very recent years the species nested in a few localities in New York City, but as soon as their habitat was altered the birds immediately disappeared. The Short-billed Marsh Wren is so excessively shy, silent and secretive on migrations that it is seldom recorded away from the few nesting areas.

The species usually appears on its breeding grounds between April 22 and the end of the month, and stragglers have been recorded in areas where the species does not breed as late as June 2. The birds ordinarily nest in small colonies of from four to twelve pairs, the spherical nests being suspended in tangles of low vegetation. There are undoubtedly two broods, local egg dates ranging from May 19 to August 20. After the breeding season the bird becomes even more secretive and is extremely difficult to find. From time to time throughout the summer vagrants occur in areas where the species does not breed, but these should not be taken for migrants. There is a pronounced southward movement through our region in October, at which time the species is most often recorded in localities where it does not breed. After October the Short-billed Marsh Wren is a very rare bird, but each year a few individuals along the coast linger into December, and one or two occasionally remain to brave the winter at the edge of some sheltered spring-fed marsh.

MIMIDAE: THRASHERS, MOCKINGBIRDS, ETC.

Mockingbird

Mimus polyglottos polyglottos (Linnaeus)

Griscom's summary for this species is so complete and concise that I quote. "The Mockingbird is one of our local species which defies classification. A century ago it was of regular occurrence in parts of southern New Jersey, colonies



existed as far north as Keyport and Sandy Hook, and Giraud reported it as nesting occasionally on Long Island. Between 1875 and 1884 there were a few sporadic breeding records, but occasional birds have been reported throughout the area from then down to the present time. Dr. Chapman, writing in 1906, suggested that many of the specimens were escaped cage-birds, and this was the general view at that time. Many years have now passed since it was lawful to possess a caged Mockingbird and the fact that the frequency of records has increased since the traffic was stopped, somewhat impugns the validity of this suggestion. At present the Mockingbird is of rare or casual occurrence, and may be expected almost anywhere in our area except in extreme northern New Jersey. Recent records are between August 1 and May 10; least often in spring. No other southern species occurs chiefly in fall and winter, and where the birds recorded locally can come from is a mystery which still awaits solution."

The large increase in active observers during the last twenty years has resulted in a quantity of records for the Mockingbird from all major localities for all months in the year. An analysis of these records indicates that the bird is rarest in June and July and occurs most frequently in autumn between September 30 and November 20. A pair started to nest at Verona, New Jersey, as recently as April, 1932. Another pair is suspected of nesting at Montauk during the summer of 1934. The only egg date I find for our region is June 3. At present the bird is seldom seen anywhere in the New York City region but on the other hand occurs annually and is a rare possibility at any time of the year in any locality.

Catbird

Dumetella carolinensis (Linnaeus)

The Catbird is one of the best known, most common, and most widely distributed summer residents over the greater



part of the New York City region. It prefers lowland tangles bordering streams and ponds, but it is an adaptable species nesting commonly in all brushy thickets and in ornamental shrubbery even around suburban yards and in the wilder city parks. In recent years it has become a fairly common summer resident on some sections of the outer strip of Long Island.

A light flight of Catbirds has been recorded as early as April 16, but it is ordinarily the last few days of April and often the first week of May before the first widespread wave reaches our area. The peak of the northward movement comes during the middle two weeks of this latter month, at which time I have seen over sixty Catbirds in a day. Ten to twenty, however, is a much more normal daily count after the northward migration ends. Stragglers are often passing through up to the beginning of June. The bird nests in low bushy tangles, preferably where vines and thorns offer added protection. There are two broods, at times probably three, local egg dates concentrated in late May, with extremes May 14 and July 31. After the breeding season the Catbird becomes rather retiring and quiet. There is a definite southward movement that commences around September 12 and continues to October 16. By the end of October the Catbird disappears from most localities, yet each year a few linger into early December, and in sheltered thickets near the coast scattered hardy individuals regularly brave the winter. These wintering individuals are astonishingly secretive and can be very easily overlooked.

Brown Thrasher

Toxostoma rufum (Linnaeus)

The Brown Thrasher, though less numerous than the Catbird, is one of our common summer residents. It is a lover

of the undergrowth in dry open country, showing a marked preference for brier thickets, hedgerows and scrubby fields. It does not hesitate, however, to settle in suburban yards and estates and is therefore one of our best known birds. The species is widely and evenly distributed throughout the New York City region. It has long been extirpated as a summer resident in Central Park and is slowly disappearing as a breeder within the city limits. The bird is very common during migrations wherever there are bushes.

Loudly singing Brown Thrashers, undoubtedly spring arrivals, have been recorded as early as April 2, but it is not until April 20 that one may confidently expect the first widespread wave. The initial week in May brings the peak of abundance for the entire year and at that time I have seen over forty Thrashers in a single day. A count of ten to twenty, however, is the maximum one may expect on any one day after the northward migration terminates. A few stragglers are passing through up to June 4. The bird usually places its nest in a thorn bush, amongst tangled vines or in any dense shrubbery, ordinarily less than four feet from the ground. Locally there are two broods, egg dates concentrated during the third and fourth weeks of May, with extremes May 8 and June 25. In late August there are often indications that a few Brown Thrashers are on the move, but it is not until the first week in September that a definite southward movement sets in. This fall migration continues up to October 20, after which date the species is usually rare. In very mild seasons a few Thrashers linger into November, and there are now over three dozen records representing all major localities of hardy birds that remained into January and even passed the winter. Whereas more Catbirds than Thrashers have wintered in the New York City region, the latter, singularly enough, are somewhat the more regular of the two at this season in the interior.

TURDIDAE: THRUSHES, ROBINS, BLUEBIRDS, ETC.

Eastern Robin*Turdus migratorius migratorius* Linnaeus

The remarkable adaptability of the Robin is undoubtedly responsible for its abundance. From the margins of the climax woodlands in the mountains of New Jersey down through the farm lands, swamps, and scrubby fields to the very last trees along the south shore of Long Island it is one of our most common summer residents. It is most abundant in disturbance communities, such as parks, suburban yards, and country estates where great lawns are surrounded by shade trees and ornamental shrubbery. With the exception of the great coastal marshes where it cannot breed and on the outer strip of Long Island, where it seldom breeds, it is least common in the deepest climax woodlands in the mountains of northwestern New Jersey and in the extensive pine barrens of Suffolk County. On migrations it is abundant in all localities, great flocks even flying over the bays and marshes along the coast.

The movements of the Robin are so variable that it is difficult to give a brief summation. It is always one of the first of our summer residents to arrive in the spring and one of the last to leave in the fall. Since flocks often winter to the north of us it is not unusual to have definite invasions after severe weather in January or February. These invasions are often erroneously thought to be early arrivals from the south. In 1926, however, after an exceptional extended warm spell in January a widespread movement of Robins did come up from the south, and flocks of one hundred or more were seen at widely scattered points in New Jersey, Westchester County and Long Island. The winter population is very irregular and unpredictable, but as a general rule the species is scarce at this season, the few hardly groups living chiefly in dense cedar groves near the coast. In very mild

seasons the first pronounced northward wave reaches our latitude between February 10 and the end of the month, but March 10 is a much more normal arrival date and three years out of five the species will not arrive before this time. The spring migration is much more extended than is generally supposed, migrants regularly passing through until the third week in May. The bird nests in a large variety of habitats and in a large variety of locations, placing its nest in bushes or trees from one to seventy feet from the ground, in discarded cars, on windowsills, in sheds, and at times even on the ground. There are two or three broods, egg dates concentrated in late April and early June, with extremes April 6 and July 24. In July, August and early September the Robins gather in definite evening roosts, these chosen retreats often holding several hundred and occasionally several thousand birds. During most of the summer a count of from fifty to one hundred and fifty per day is a normal maximum. In fall the Robins leave the parks and suburban yards, gather in flocks and roam the countryside seeking the seeds of dogwoods, mountain ash, bittersweet and wild grapes. After November 15 the Robin ordinarily becomes scarce, yet small flocks linger into December and a few regularly winter.

Northern Varied Thrush

Ixoreus naevius meruloides (Swainson)

This species is an accidental visitant from the far northwest. A specimen was taken at Hoboken, New Jersey, in December, 1851, and was recorded by G. N. Lawrence. Griscom listed three records for Long Island: an old specimen from Islip (G. N. Lawrence), one from Port Jefferson, December 20, 1889 (A. Helme), one at Miller Place, November 19, 1905 (A. Helme).

I find but two recent records, both sight identifications: one carefully studied at Ossining, November 10, 1928 (Mary Sheridan), another seen on Staten Island, November 24, 26.

27 and December 6, 1936 (Mrs. J. Boesch, W. T. Davis, Dr. Wiegmann *et al.*).

Wood Thrush

Hylocichla mustelina (Gmelin)

This lovely singer is partial to moist open woodlands having rich undergrowth. It occurs almost as frequently on estates and in suburban yards and parks wherever numerous shade trees and patches of dense shrubbery are found. Over the larger part of our region it is a common summer resident and a very common transient visitant. It cannot tolerate too much crowding and has disappeared as a breeder from Central Park and is gradually decreasing around the outskirts of the metropolis. In the pine barrens and on the coastal strip of Long Island it is known only as a rare transient visitant.

The Wood Thrush has been recorded on Long Island as early as April 13 ("Birds of the New York City Region") and at scattered points in our region during the next two weeks. Such dates are, however, abnormal as the first widespread wave never arrives before the last few days of the month, and more often not until the first week in May. The peak of the spring flight comes between May 10 and 22 at which time I have recorded over three dozen Wood Thrushes during a vigorous day of birding in Westchester County. After May 25 migration is virtually concluded, very few stragglers passing through during the first week in June. The nest is usually placed in a tree from three to twelve feet from the ground. There are one or two broods, local egg dates concentrated in late May, with extremes May 16 and July 18. After the end of July the Wood Thrush becomes secretive and is usually hard to find. There is a light but definite southward movement through our region from the first cold snap in early September to the middle of October, individuals very infrequently lingering to November 10. I find one very

abnormal record: a bird at Plainfield, New Jersey, from December 19 to 25, 1909 (W. Miller).

Eastern Hermit Thrush

Hylocichla guttata faxoni Bangs and Penard

This species is the hardiest of the genus *Hylocichla*, being the first to arrive in the spring and the last to leave in the fall. Over the larger part of our region it is known only as a common transient visitant and a very rare winter resident. During migrations it is widely distributed, being common to abundant wherever there are trees and tall bushes. Since the Hermit Thrush is essentially a bird of the Canadian Zone its presence as a summer resident in the mountains of New Jersey might be expected, but there it is very rare and extremely erratic. Its presence as a locally common breeding bird in the dry hot pine barrens of Suffolk County, Long Island, between Commack and Hither Hills is inexplicable.

In very mild seasons a light wave of Hermit Thrushes might be expected as early as the fourth week in March. April 6, however, is a much more normal arrival date with the peak of the spring migration coming during the last three weeks of this month. At this season one will often see from one to four dozen Hermit Thrushes in a day. With the arrival of May, transients quickly thin out, and all migration is normally terminated by the end of this month. Stragglers are rarely recorded up to the third week in June. The bird apparently demands at least a sprinkling of conifers in its breeding grounds. In our region, however, breeding requirements are varied and perplexing. The nest is usually placed on the ground. There are one or two broods, egg dates ranging from May 14 to June 22. From the first week in August to early September birds irregularly appear in localities where the species does not breed, and these might represent a light southward movement. Pronounced migration generally starts in mid-September and extends to November 20.

with the bulk of birds passing through during late October and early November. After the end of November the Hermit Thrush becomes very rare, yet individuals regularly linger into December, and every year a very few remain in sheltered ravines and cedar thickets throughout the winter. These wintering birds are confined principally to the coast, the bird at this season being purely fortuitous in the highlands of the interior.

Olive-backed Thrush

Hylocichla ustulata swainsoni (Tschudi)

The Olive-backed Thrush is an abundant breeding bird far to the north of us in the spruce forests of the Canadian Zone. In our region it is a common transient visitant both spring and fall showing a marked preference for deep, cool woodlands, yet occurring regularly in all localities where there are trees and tall bushes. As is the case with a great many of our passerine birds it is decidedly less common, especially in spring, in eastern Nassau and Suffolk Counties.

The Olive-backed Thrush has been recorded in Westchester County as early as April 28, 1925 (R. Coles). There are now many records for the initial week in May, but the bird belongs to the second group of May migrants and ordinarily arrives in a widespread wave some time during the second week of this month. The peak of the spring movement does not come until the third week of May, and at this time one will occasionally see from one to four dozen individuals in a day. Stragglers have often been recorded in early June, the latest at Elmhurst, Long Island, June 11, 1933 (M. Beals). A specimen in the United States National Museum was collected at Oyster Bay as early as August 22. With the arrival of early September nights one will regularly hear a few of the Olive-back's diagnostic calls coming from the depths of the sky, and this is often the only indication that the species has started on its southward migration. The bulk of migrants



passes through between September 6 and October 20, and at this time the bird is at maximum abundance for the entire year. Whereas the highest number I have seen in a day during this period is thirty-nine, I have certainly heard hundreds passing low overhead in Westchester County on many a frosty night. After October the Olive-backed Thrush is a very rare bird. There is a specimen in the Dwight collection taken at Oyster Bay, Long Island, November 6, 1874, and a report of one seen in Bronx County, November 5, 1933 (Norse).

Gray-cheeked Thrush

Hylocichla minima aliciae (Baird)

The Gray-cheeked Thrush is a fairly common transient visitant over the larger part of our region, apparently being decidedly less numerous than the preceding species. It is rather widely and evenly distributed, but as one might expect it is progressively less common eastward on Long Island, and along the entire south shore of eastern Nassau and Suffolk Counties it is astonishingly uncommon. It should be stated that the bird is very silent on migrations, is particularly partial to moist willow thickets and alder beds where it can easily be overlooked, is relatively difficult to identify positively during the fleeting glimpses it gives of itself, and may be somewhat more common locally than one's records indicate.

There is a report of one seen at Orient, Long Island, April 22, 1936 (Latham), another in Bronx Park as early as April 27, 1935 (Norse, Cantor and W. Weber), and there are several reports of birds as early as May 5. The Gray-cheeked Thrush definitely belongs, however, to the third groups of May migrants and should not be expected before May 10. The period of maximum abundance comes during the fourth week of this month, yet even at this time it is unusual to see more than three to six individuals in a day. My highest day's

count is but fourteen. A few stragglers irregularly linger through the first week in June. On five different occasions southbound birds have been recorded as early as August 31 and September 1, but it is usually the end of the third week in September before the first birds arrive and always late September or early October before a fall peak is reached. After the fourth week in October the Gray-checked Thrush is purely casual. One was collected at Ossining, Westchester County, on November 21, 1922 (Brandreth), and another was carefully studied at Manorville, Long Island, on the remarkable date of December 10, 1937 (Raynor).

Bicknell's Thrush

Hylocichla minima minima (Lafresnaye)

The Bicknell's Thrush is a small facsimile of the Gray-checked, with only slight average differences in measurements, and consequently it cannot be positively identified in the field. An analysis of all collected specimens and all banding records indicates, however, that it is probably only half as common as the Gray-checked, has the same distribution on migration throughout our entire region as that species, and has migration dates that are practically identical. It might be significant that the majority of supposed Gray-checks picked up dead in southern Nassau County after October 12 have proved to be Bicknell's.

A further analysis of collected and banded birds reveals that the species has occurred in spring as early as May 11 and lingered until May 27, with the peak of abundance coming at the beginning of the fourth week in the month. In fall it has occurred as early as September 7 and has regularly lingered to October 23, with the bulk of birds passing through between September 26 and October 8. Griscom listed a record for Long Island as late as October 23, and Mrs. Beals has a record of one at her banding station in Elmhurst, Long Island, as late as November 8, 1936.

Wilson's Thrush; Veery*Hylocichla fuscescens fuscescens* (Stephens)

The Veery is particularly fond of rich, moist woodlands having luxuriant undergrowth. It is a common summer resident and an abundant transient visitant over the larger part of the New York City region with the exception of the immediate vicinity of the coastal plain. It is most common in northern Westchester County, Rockland County and throughout northern New Jersey, decreasing gradually to the southward and abruptly near the outskirts of the metropolis. On Long Island a few breeding pairs have been found on the north shore between Flushing and Northport and on the south shore between Idlewild and Woodmere. In recent years in southern Nassau County birds have been heard singing throughout June in ideal habitat near Massapequa and along the Meadowbrook Causeway, and it seems probable that they have bred there. Over the larger part of Long Island east of a line extending from Northport to Woodmere the Veery is an uncommon to rare transient visitant.

Griscom listed two abnormally early records, one for Long Island on April 13 and another for Bronx County on April 12, 1912 (G. Noble). I can find no recent records to approach these. In fact the Veery very rarely arrives as early as April 28 and usually goes unrecorded until the first pronounced wave in May. The peak of abundance for the northward movement comes during the second and third weeks of this month and at this season in Westchester County I have recorded as many as twenty-seven individuals in a day. Stragglers are regularly passing through as late as the first week in June and casually later. The bird usually nests on or very near the ground. There are one or two broods, egg dates concentrated in late May, with extremes May 19 and July 6. Mrs. Beals has banded several birds at Elmhurst, Long Island, where the species does not breed, during the

middle of July, and it is probable that migration starts this early. All through August the mellow calls of the Veeries are frequently heard at night, and counts on foggy nights will often reveal that hundreds are passing over. Singularly, the species is seldom recorded in any numbers at this season during the day. By September most of the birds have departed for their winter grounds, and only an occasional straggler will linger to October 15. One was carefully studied at Baldwin, Long Island, November 3, 1939 (Mrs. Selby), and Griscom lists one for Long Island as late as November 5.

Eastern Bluebird

Sialia sialis sialis (Linnaeus)

The Bluebird is partial to open country, especially around farms and orchards. It is still a fairly common summer resident in the rural districts of Rockland County, Westchester County and New Jersey but continues to decrease slowly in the heavily populated suburbs, particularly in the immediate vicinity of the metropolis. On Long Island it has decreased markedly and in most places disappeared entirely from Queens and Nassau Counties. In Suffolk County, where it has always been an uncommon and local summer resident, its status remains practically unchanged. In most localities where it does not breed the Bluebird is an uncommon spring and a common fall transient visitant. Over the great coastal meadows, along the outer strip of Long Island and in such places as Central Park it is indeed rare even on migrations and is purely casual at any other time.

In exceptionally mild seasons the spring flight will arrive as early as February 22, but March 12 is a much more normal arrival date. This northward movement is ordinarily surprisingly light and in many localities goes unnoticed. The majority of birds pass through between March 20 and April 10, only stragglers migrating to the end of the month. Va-

grants are irregularly recorded throughout the summer in localities where the species positively does not breed. The nest is placed in the cavity of a tree or in a bird box from three to thirty feet from the ground. Locally there are two or three broods, egg dates ranging from March 29 to July 18. Though a widely known species, the Bluebird is in reality relatively uncommon in our region as a summer resident and a count of from two to twelve pairs in a day even in the best bluebird areas is the maximum one may expect. With the coming of the first heavy frosts in early October the Bluebirds gather in flocks and start on their southward migration. These southbound flocks are usually made up of from ten to sixty birds, very rarely as high as several hundred. By December the migration has terminated, and only the winter population remains. This is naturally subject to wide variations, but a few Bluebirds are always present in our region during the winter, especially in the rural districts of Westchester County and New Jersey.

Greenland Wheatear

Oenanthe oenanthe leucorhoa (Gmelin)

An accidental visitor from the far north. Griscom listed three specimens taken on Long Island, the last near Jamaica in 1885. I find but two recent records: a bird studied for over three hours while it fed with a flock of fifty Snow Buntings at Montauk, December 27, 1936 (L. Breslau), another carefully studied at Moriches Inlet, Long Island, June 3, 1941 (Wilcox).

Townsend's Solitaire

Myadestes townsendi (Audubon)

There is but one record for this far western species: a specimen collected at Kings Park, Long Island, November 25, 1905 (J. A. Weber).



SYLVIIDAE: KINGLETS AND GNATCATCHERS

Blue-gray Gnatcatcher*Poliophtila caerulea caerulea* (Linnaeus)

The Blue-gray Gnatcatcher breeds along the coast as far north as southern New Jersey and in the interior as far north as Michigan and southern Ontario. It has been steadily increasing in the New York City region and must now be considered a rare but regular transient visitant. I can find only one breeding record for our region: a nest found near Swartwood Lake, Sussex County, New Jersey, in May 1928 (R. G. Furness). It is highly probable that more intensive field work in western New Jersey might reveal that the bird breeds sporadically.

Though a rare transient visitant, there are now well over one hundred records for the New York City region representing most major localities, and I can see no point in listing a quantity of them. Suffice it to say three to twelve birds are recorded every year, and on one occasion as many as three were seen in one day in Bronx County. That most of the records are grouped around the greater metropolitan area is undoubtedly due only to the more intensive work done by numerous observers in this section. The bird has been recorded at Dyker Heights, Brooklyn, as early as April 3, 1929 (Breslau), and in Prospect Park, Brooklyn, on April 7, 1910 (Victor). There are now numerous records between April 19 and May 20 and a sprinkling of dates up to May 27, 1928 (Bronx County Bird Club). Individuals seen at Tuckahoe, Westchester County, June 27, 1936 (Bull), and on Long Island, July 1, 10 and 13 (*vide* Griscom) are difficult to allocate. They might be very early fall migrants, but it is more likely that they represent wanderers from the south as it is ordinarily mid-August before the autumn migration begins. The large majority of autumn records are grouped in the first half of September. The occurrence of the Blue-gray

Gnatcatcher after October 10 is purely fortuitous, yet I find a record for Orient, Long Island, October 25, 1924 (Latham), one for the grounds of Columbia University, New York City, October 27, 1936 (O. Stephenson), and another for West Long Branch, New Jersey, November 17, 1940 (Seeley).

Golden-crowned Kinglet

Regulus satrapa satrapa Lichtenstein

Though the Golden-crowned Kinglet is decidedly partial to conifers both on its northern breeding grounds and in all localities where it winters, as a transient it is surprisingly evenly distributed, even occurring regularly in the low beds of seaside goldenrod, poison ivy and high-tide bush along the outer strip of Long Island. Over the larger part of our region it is a common transient visitant and, depending on locality, a rare to fairly common winter resident. Its numbers, from year to year, are apparently subject to much variation. Griscom mentions a large mortality of this species during the extremely severe winter of 1917-18, after which it was quite rare for several years.

The Golden-crowned Kinglet has been recorded at Roslyn, Long Island, as early as September 8, 1940 (Cruickshank), and in several localities within the next ten days, but it is usually September 26 before the first widespread wave arrives from the north. The peak of the autumn migration comes in late October or early November, and flocks are regularly passing through until the end of this latter month. Ordinarily one may not expect to see over ten to thirty Golden-crowned Kinglets in a day, but occasionally concentrations of a hundred or more are encountered. Throughout the winter the species is rare to uncommon in most localities. In large groves of cone-bearing trees, however, it is often a fairly common winter resident and in some years actually abundant. With the first sustained warm spell in late March or early April

the northbound Kinglets appear. This spring movement is pronounced and abrupt, the majority of birds disappearing by April 20. Small flocks are irregularly recorded up to the end of April, and stragglers have lingered in Essex County, New Jersey, to May 11, 1929 (W. Rusling), and at Orient, Long Island, as late as May 19, 1917 (Latham).

Eastern Ruby-crowned Kinglet

Corthylio calendula calendula (Linnaeus)

The Ruby-crowned Kinglet is a fairly common transient visitant and a very rare winter resident in the New York City region. Though it is rather evenly distributed on migrations, it favors two very different types of habitat, one, the luxuriant swampy thickets around ponds and streams, the other, deep coniferous woodlands.

One bird arrived in Passaic County, New Jersey, on the very abnormal date of August 29, 1922 (W. Miller), and there are a few records for the second week in September. September 20 is, however, a much more normal arrival date, with the bulk of migrants passing through during the end of this month and the first half of October. During November the species becomes progressively scarcer, and by the end of the month only a few stragglers or vagrants remain. The bird is decidedly rare in winter, with the majority of records concentrated in the conifer thickets of sheltered ravines near the coast. Naturally years of intensive birding have uncovered several dozen winter dates, and I can see nothing to be gained by listing them. In very advanced seasons small flocks of Ruby-crowned Kinglets will appear as early as March 24. Ordinarily the species arrives in a widespread wave in early April in company with the Yellow Palm Warbler and the Hermit Thrush. The peak of the spring flight comes in mid-April when one will regularly see twenty or thirty and occasionally as many as sixty Ruby-crowned Kinglets in a vigorous day of birding. Only a small number of individuals

linger into May, one or two occasionally as late as May 23, and once a straggler was recorded in Alpine, New Jersey, as late as May 30, 1933 (Bowdish).

MOTACILLIDAE: WAGTAILS AND PIPITS

American Pipit

Anthus spinoletta rubescens (Turnstall)

The Pipit is essentially a terrestrial species preferring wide coastal meadows, beaches, extensive plains and plowed fields. In the New York City region it is an uncommon spring and a common to abundant fall transient along the coastal plain and in the Hudson River Valley. In the uplands of the interior the bird is generally rare and irregular on migrations, although occasionally large flocks are encountered. In fact it is a possibility in any locality, and even in the climax woodlands of the interior I have heard flocks flying high overhead.

There is one very abnormal record of a Pipit at Dyker Heights, Brooklyn, as early as August 19, 1926 (G. Hix), and there is a light sprinkling of records from August 27 to September 15. The fourth week in September is, however, the normal time of arrival, with the first heavy flights ordinarily coming early in October. All through this month and the first half of November the bird is very common to abundant, especially along the coastal marshes and on the extensive plowed fields of the interior of Long Island, and at this season it is not very unusual to see flocks of from one to five hundred individuals in such localities. By the end of November the bird is purely casual in the interior, but along the coast small flocks irregularly winter on the extensive salt meadows, especially around Jamaica Bay. If the winter is exceptionally mild northbound flocks of Pipits will be recorded as early as February 22, but March 12 is a more normal arrival date, with the spring peak coming late in that

month. Most of the Pipits either skip right over us or go northwest of the Alleghanies, as the spring flight is always very light in our region compared with the spectacular fall invasions. The bird is decidedly uncommon after mid-April, very few linger into May, and the latest date before me is from Montauk, May 30, 1930 (Wilcox).

BOMBYCILLIDAE: WAXWINGS

Bohemian Waxwing

Bombycilla garrula pallidiceps Reichenow

A very accidental visitant from the northwest. There are Long Island specimens labeled 1851, and North Haven, Suffolk County, April 18, 1889. Giraud states that several were collected in 1830 and 1832, and Audubon records it in 1838.

I find only one positive record for this century: a bird collected in Westchester County in February, 1924 (Kuerzi *vide* Chapman). The species has been reported as seen a number of times, but only the two following records are convincing: Mt. Kisco, Westchester County, November 23, 1924 (Mr. and Mrs. Tucker, Mrs. Janvrin *et al.*); Chappaqua, Westchester County, March 14, 1936 (Pangburn).

Cedar Waxwing

Bombycilla cedrorum Vieillot

The Cedar Waxwing is a bird of the rural districts, preferring the margins of second growth woodlands, orchards and farm lands. It is a common summer resident over the larger part of New Jersey, Rockland County and Westchester County, decreasing abruptly in the vicinity of the ever-expanding suburbs. On Long Island it is a very uncommon local summer resident in Suffolk County, breeds sparsely in Nassau County and casually in the wilder sections within the city limits. During migrations it is an uncommon late spring



and common fall transient everywhere, except along the coastal strip where it is rare at any time. It must be added, however, that in our region the movements of the Cedar Waxwing are extremely erratic, and groups are liable to show up in any locality at any time even during the most severe sub-zero freeze.

From time to time vagabond flocks appear in February, March and April and are erroneously taken to represent the beginning of spring migration. As a matter of fact the Waxwing is ordinarily one of our latest arrivals, seldom appearing in a marked wave before May 10. This northbound flight is usually very light and extends well into the middle of June. The birds nest from four to forty feet from the ground in either a deciduous or coniferous tree, being very partial to white pines, tamaracks and orchard varieties. There are one or two broods, egg dates concentrated in July, with extremes June 12 and September 15. With the arrival of late August, bands of Waxwings take to the fresh-water marshes and indulge in spectacular flycatching. At this season it is astonishing to see a bird that is ordinarily so quiet, composed and deliberate behaving in such an excited manner. The fall migration is rather extended and variable, but it is always much heavier than the spring movement. It begins with the first light frost in September and extends to mid-November, with the peak of abundance for the entire year ordinarily coming during late September or early October. At this season the birds frequently gather in flocks of over one hundred individuals and high daily totals are often possible. Ordinarily one will not, however, see over fifteen to thirty Waxwings on any one day. By the end of November the bird becomes very scarce, yet flocks periodically linger into December, and in areas where there are good supplies of frozen apples or the fruit of red cedars and hawthorns some occasionally winter. The status of the Cedar Waxwing for any one winter is unpredictable, but ordinarily it is extremely rare at this season.

LANIIDAE: SHRIKES

Northern Shrike*Lanius borealis borealis* Vieillot

This winter visitant is principally a bird of swampy thickets, sparsely wooded fields, orchards and the edges of open rural roads. In such places it is usually found perched on a conspicuous twig, fence or telephone wire where it can easily survey its surroundings. With us the species is extremely erratic, sometimes virtually absent for an entire winter, usually rather uncommon to rare, yet periodically numerous as in the winters of 1921-22 and 1926-27. A few reach the eastern end of Long Island and northern Westchester County every winter. One considers oneself fortunate, however, to see a Northern Shrike anywhere in the New York City region, and the counts of six in a day made during the winter of 1926-27 are unique.

The species has reached Staten Island as early as October 12, 1931 (Decker), and has been recorded sparsely at widely scattered points in our region during the last two weeks of this month. It is ordinarily November before the first individuals show up and normally early December before any widespread movement arrives. The bird is most frequently recorded in December, January and February and is always most frequently found in eastern Suffolk County. The species is much too irregular and unpredictable for one to calculate a period of maximum abundance. By the middle of March most of the Northern Shrikes have departed for their Canadian breeding grounds. A few birds infrequently linger into April, and stragglers have been recorded at Orient Point, Long Island, as late as April 25, 1927 (Latham), and at North Salem, Westchester County, as late as April 25, 1931 (Kuerzi). A specimen collected at Franklin, New Jersey, April 20, 1873 (Carryl), is the latest record before me for that state.

Migrant Shrike

Lanius ludovicianus migrans W. Palmer

Like the preceding species the Migrant Shrike prefers swampy thickets, sparsely wooded fields, hedgerows, orchards and the edges of low brush along the outer beaches. It is partial to a conspicuous perch and is ordinarily seen on some dead branch or telephone wire. With us the bird is essentially a transient visitant, uncommon but regular in fall and very rare in spring. Though it occurs in all sections of our region, the large majority of records, especially in the autumn, come from along the coastal strip of Long Island.

The Migrant Shrike is so rare in spring that in many sections it goes unrecorded at this season for years at a time. Due to the intensive birding during the last few decades, however, I find thirty-seven spring records representing most major localities. These spring dates are concentrated in April, with extremes from Idlewild, Long Island, March 22, 1939 (J. Mayer), and Plainfield, New Jersey, May 3, 1906 (W. Miller). A fledgling was collected at Ossining, Westchester County, on June 16, 1877 (A. K. Fisher), and there is no question that the species bred locally. In the fall the bird is decidedly more regular, and along the outer strip of Long Island may be expected at this season every year. Individuals have occurred in Bronx County as early as August 4, 1924 (L. N. Nichols), and at scattered points in the region during mid-August, but it is ordinarily the last week in this month before the first birds arrive. September marks the peak of the southward movement, and over eighty per cent of local records fall in this month. It should be added that the recording of a Migrant Shrike anywhere in our region is always considered a piece of good fortune and even the keenest and most active observer may miss the species for any one year. The highest day's count before me is four. After the end of

October the bird is exceedingly rare, yet individuals occasionally linger into the winter, and there are now too many December and January reports to list. It must be emphasized that in winter great care should be taken not to confuse this species with its northern relative. A Migrant Shrike was collected in Queens Village, Long Island, on January 26, 1930 (Burggraf); one was very carefully studied through a fifty power telescope at Montauk Point on February 12, 1938 (J. Elliott), and another was carefully identified at Orient Point, February 7, 1919 (R. Latham).

STURNIDAE: STARLINGS

Starling

Sturnus vulgaris vulgaris Linnaeus

Many people are surprised to learn that there were several unsuccessful attempts to introduce this species in the United States. Finally sixty Starlings were liberated in Central Park on March 16, 1890, and forty more on April 25, 1891. These birds were highly successful and soon began to spread beyond the New York City limits. The species was first noted on Staten Island in 1891, in Englewood and Plainfield, New Jersey, in 1898, in Bronx County in 1899, and on Gardiner's Island in 1908. After that the increase was phenomenal, and by 1916 the species was breeding as far north as Vermont and New Hampshire and as far south as Maryland.

To-day the Starling is an abundant permanent resident over the larger part of the New York City region. It is principally a bird of disturbance communities, preferring parks, gardens, lawns, cultivated fields, pastures and garbage dumps. It is, however, very adaptable and in recent years has become regular even in the rural districts of northwestern New Jersey. The species nests in a variety of places ranging from cracks

in buildings and broken advertising signs along city streets to bird houses, woodpecker cavities and even crevices of cliffs. There are one, and occasionally two broods, local egg dates concentrated in April, with extremes March 18 and August 20. Late in May the first flocks of young wheel about our parks and suburbs. In July these are joined by second broods. Thereafter the flocks grow, and with the first frost in September swarms apparently arrive from the north for there is a sudden influx and one may see thousands in a single impressive gyrating flock. From late August through November Starlings join flocks of mixed blackbirds, and many undoubtedly migrate with these other species. Some of the autumn and winter roosts, such as the one near the mouth of the Raritan River, are breath-taking, estimates of over one hundred thousand birds coming from careful observers. After November the Starlings thin out in the highlands of northwestern New Jersey and northern Westchester County. On the other hand, throughout the winter thousands gather in New York City each evening and, much to the annoyance of many people, literally whitewash such respectable places as the Metropolitan Museum of Art and Riverside Church. Some of these birds travel thirty miles each evening and morning between their roosts and their feeding grounds.

I agree that the Starling can be annoying when roosting around buildings, and that one might rightfully feel "peeved" if a Purple Martin house or a Bluebird cavity were usurped. Much of the Starling's bad reputation is, however, unfounded. I lend no support to the flimsy objection that the species does not belong here. The Starling is an interesting, entertaining bird, its wheeling flocks cannot be surpassed for grace and beauty, its music is ever amusing, and studies of its food have proved that it is just as beneficial as the majority of our native passerine birds.

VIREONIDAE: VIREOS

White-eyed Vireo*Vireo griseus griseus* (Boddaert)

This perky little bird, though very partial to moist lowland thickets and the brushy edges of swamps and lakes, will occasionally be found nesting in dense tangles of vegetation on dry hillsides. It has decreased markedly in and around the ever-expanding suburbs during the current century and today is very rare as a breeding bird near New York City, yet a few pairs still nest within the city limits. It is a fairly common local summer resident in most of our rural districts, but being essentially a bird of the lowlands becomes rare to unknown in the mountains and the higher hills of north and northwestern New Jersey, Rockland County and extreme northern Westchester County. On Long Island it is a fairly common but very local summer resident, except at the eastern end where it is rather rare as a breeder and on the outer strip where it is only a rare transient. Wherever the species does not breed it is a surprisingly uncommon to rare transient visitant.

The White-eyed Vireo has arrived in Woodmere, Long Island, as early as April 21, 1929 (Woodmere Academy Bird Club), but it is ordinarily the closing days of this month or the first few days in May before any widespread wave occurs. A count of two or three on any one day in areas where the species does not nest is exceptional, but on some of the better breeding grounds, such as around Massapequa, Long Island, I have recorded over two dozen in a day of diligent search. By the middle of May the bulk of the summer residents has arrived, and only stragglers are passing through as late as June 6. The bird usually places its cup-like nest less than eight feet from the ground. There are one or two broods, local egg dates concentrated in late May, with extremes May 17 and July 5. After the breeding season the bird becomes

silent and is generally overlooked. Fall migration begins as early as August 22, and most of the birds pass through during the first two weeks in September. After the end of this month the species is exceedingly rare, yet I find records sprinkled over the first two weeks of October, the two latest: Freeport, Long Island, October 15, 1935 (Cruickshank), and East Hampton, Long Island, October 17, 1929 (Helmuth).

Bell's Vireo

Vireo belli belli Audubon

This little vireo from the central United States has twice been reported in our region. One specimen was seen and heard at Woodmere, Long Island, August 27, 1932 (Berliner and Harrower), and another was carefully studied and compared with a White-eyed Vireo at East Hampton, Long Island, several years ago (Helmuth). A Bell's Vireo was collected in Durham, New Hampshire, November 19, 1897, and another was banded in Sewell, New Jersey, in the summer of 1940, and I have no doubt that both sight identifications for our region are correct. The bird so closely resembles the White-eyed Vireo, however, that there is some possibility of error, and I think it expedient to keep the bird on the hypothetical list for the present.

Yellow-throated Vireo

Vireo flavifrons Vieillot

The Yellow-throated Vireo is essentially a bird of tall deciduous trees, and were it not for its diagnostic rich song its presence would frequently be overlooked. It was formerly a common summer resident throughout the New York City region, even nesting in Central Park as late as 1914. At the beginning of this century it became evident that the species was slowly decreasing. In 1917 this decrease was accelerated.

and five years later the species was considered uncommon to rare in all but the most rural sections of New Jersey. In the last eighteen years the Yellow-throated Vireo has shown a slight increase, and it is now a fairly common summer resident in the rich open woodlands throughout Rockland County, the northern two-thirds of Westchester County and rural New Jersey, progressively decreasing towards the metropolis. A few pairs still nest within Bronx County. On Long Island it has not shown any appreciable signs of returning and is still a decidedly rare local breeder in the rolling deciduous sections of the north shore from Flushing to Southold. Over the larger part of our region the species is fairly common during migrations. It is, however, a very rare transient along the south shores of Nassau and Suffolk Counties and is purely casual on the outer strip.

Three Yellow-throated Vireos were seen at Hanover Neck, New Jersey, on the remarkably early date of April 19, 1937 (Mr. and Mrs. Rich). There are also records sprinkled all through the last week of this month, but it is ordinarily not until the first big wave in early May that one may expect to find this species. The peak of the northward movement comes in mid-May, and at this season I have recorded as many as fourteen individuals in a day. By the end of May migration is virtually concluded, very few stragglers passing through during the first week in June. The bird places its lichen-decorated nest in a deciduous tree from five to sixty feet from the ground. There is but one brood, local egg dates concentrated in the last week of May, with extremes May 21 and June 23. By August 24 the species is definitely on the move again, and by the first week in September the peak of the southward migration is reached. After the end of this month the bird is exceedingly rare, yet I find records by reliable observers for every day during the first week in October, the latest at Bayside, Long Island, October 12, 1934 (H. Bohn).

Blue-headed Vireo*Vireo solitarius solitarius* (Wilson)

The Blue-headed or Solitary Vireo, the first member of its family to arrive in spring and the last to leave in the fall, is partial to mixed coniferous and deciduous woodlands, especially where there is a good percentage of White Pine and Hemlock. In the larger part of our region it is known only as a transient visitant, and though it has decreased slightly in recent years it is still fairly common on migrations. Like most passerine transients it is least common in Nassau and Suffolk Counties and is actually uncommon to rare at the extreme eastern end of Long Island and purely casual along the outer strip. It would not be surprising if further investigations uncovered a few nesting pairs in the highlands of northern Westchester County as the species breeds sparsely in identical terrain just to the north in Putnam County and Connecticut. Dugmore lists a nest for South Orange, New Jersey. Birds have occasionally been heard singing throughout June and July in ideal country in the Kittatinny Mountains and on the Waywayanda Plateau in northern New Jersey, and there is no question that the species occasionally nests in both places. Charles Urner actually found a nest-building bird near the Delaware Water Gap on July 20, 1930.

The Blue-headed Vireo has been recorded in Central Park, New York City, as early as April 9, 1908 (A. Crolius and Griscom), but April 20 is a much more normal arrival date and most of the migrants pass through during the first ten days of May. By May 20 migration is virtually over, yet stragglers infrequently linger as late as the initial week in June. An extraordinarily early fall migrant reached Roslyn, Long Island, on September 1, 1928 (Mrs. Fry). The species seldom shows up, however, before September 22 and is never seen in numbers until October. This month marks the peak of abundance for the entire year and on good days as many as eleven

Blue-headed Vireos have been recorded by a single observer. After October the species is decidedly rare, yet I find records of abnormal individuals at East Hampton, Long Island, November 26, 1938 (Helmuth), and Hempstead Lake, Long Island, December 1, 1937 (Mayer).

Red-eyed Vireo

Vireo olivaceus (Linnaeus)

The Red-eyed Vireo is one of our most common, most widely distributed and best known summer residents. It is not only common in all deciduous woodlands but nests regularly in shade trees in gardens, parks and even along suburban streets. Though still breeding on the outskirts of the metropolis and sparsely even on Manhattan, it is steadily decreasing as a summer resident in all heavily settled areas. Everywhere throughout the region the species is common to abundant during migrations.

The Red-eyed Vireo has been recorded in Bronx Park on the abnormal dates of April 18, 1933 (Drescher and Gibson), and April 24, 1913 (L. N. Nichols). I find only three other April records. In fact the species belongs to the second group of May migrants and is seldom seen before May 9. The first arrivals are ordinarily silent and therefore overlooked. The peak of the spring flight comes during the third week of the month, and stragglers are passing through as late as mid-June. Throughout the summer the Red-eyed Vireo is one of our most constant singers, and I have counted over sixty individuals in a day's walk in Westchester County. The bird places its nest far out on a branch of a bush or tree from one to sixty feet from the ground. There are usually two broods, local egg dates concentrated in early June, with extremes May 24 and July 27. A few individuals show up in small city parks, where the species does not breed, as early as the opening days of August. The fall movement is, however, not noticeable until two weeks later, and the bulk of birds does

not pass through until the last ten days in September. After the middle of October the Red-eyed Vireo is a very rare bird, yet I find six dates for November, the two latest: Brooklyn Botanical Gardens, November 8, 1938 (Tengwall), and Bronx County, November 14, 1926 (Cruickshank).

Philadelphia Vireo

Vireo philadelphicus (Cassin)

The Philadelphia Vireo is chiefly a bird of second growth deciduous woods and should be looked for at low or medium levels. Until recently it was one of our very rarest transient visitants, especially in the spring. Griscom, writing in 1923, stated "It is not without significance that our six most active local field ornithologists have detected exactly two individuals in twenty years' observations on the part of each of them." It is still very rare in spring and uncommon to rare in fall, but there has been a definite increase in recent years, and there are now many records for most major localities. The species is apparently rarest in Nassau and Suffolk Counties. Elsewhere it probably is fairly evenly distributed, the concentration of records around the metropolis being due only to the concentrated birding in this section.

There are records for the Philadelphia Vireo from Inwood, New York City, May 4, 1936 (Norse), and Central Park, May 4, 1937 (Sedwitz *et al.*). These dates are, however, decidedly abnormal as the species is seldom recorded before May 12, and the large majority of spring records are concentrated between May 16 and 22. One straggler has remained as late as June 1. Fall dates are much more numerous. I find a report of one at Troy Meadows, New Jersey, on the almost unbelievable date of August 9, 1931 (Breslau and Sedwitz), and another in Central Park on August 17, 1936 (Norse). The next arrival date is for one carefully studied at East Hampton, Long Island, on August 27, 1934 (Hel-muth), but even this is early as the species seldom arrives

before the first week in September, and the majority of records fall between September 14 and 26. A specimen was collected at Englewood, New Jersey, October 3, 1916 (J. Weber). There are two very late sight identifications: one from Idlewild, Long Island, October 13, 1929 (Mayer), another from Ossining, Westchester County, October 20 (A. K. Fisher).

Eastern Warbling Vireo

Vireo gilvus gilvus (Vieillot)

The Warbling Vireo frequents the tops of tall deciduous trees, showing a marked preference for rows of giant elms in villages, parks and along golf courses and streams. It is seldom seen away from its lofty retreat, and were it not for its rich song which bears a surprising resemblance to that of the Purple Finch it would usually go undetected. Its history almost parallels that of the Yellow-throated Vireo. Formerly a common summer resident over the greater part of our region it showed signs of decreasing early in the current century, dropping to a low in 1922. Since that time there has been a slow but steady increase in most rural districts but a continuous decline in the densely populated suburbs. At present the Warbling Vireo is a fairly common summer resident in the forementioned habitat throughout New Jersey, Westchester County and Rockland County, decreasing abruptly in the immediate vicinity of the metropolis. Since 1914 the bird has not bred in Central Park, but at least four pairs still breed in Bronx County. To my knowledge the Warbling Vireo has never been found nesting on Staten Island. On Long Island it is and always has been a very rare bird. A few pairs nest at scattered points on the estates along the north shore, especially between Bayside and Millneck, a pair or two in the tall elms in East Hampton, and an occasional pair at Idlewild in southern Queens County. In all localities where the species does not breed it is known only as an uncommon to rare transient visitant.

The Warbling Vireo has occurred on several occasions as early as April 28 and 29, but it is ordinarily the first big wave in May that brings the initial widespread movement, and it is usually the middle of the month before one hears the rich warbling of this species. The peak of the spring flight comes between May 16 and 22, and only stragglers are passing through as late as June 5. It must be emphasized that at present a count of seven Warbling Vireos on any one day is the maximum one may expect even in the best localities. The bird places its small cup-like nest at the extreme end of a slender branch, usually over thirty feet from the ground. There is but one brood, local egg dates ranging from May 18 to June 17. After the nesting season the species ordinarily becomes very silent, and records are few. By the middle of August there are indications that the southward movement is under way as birds show up in places where the species definitely does not nest. There is, however, no pronounced fall migration through our area, most of the birds merely disappearing by the middle of September. Singularly, there is often a renewal of song in the fall, and our two latest dates are of singing individuals. One was heard in the Bronx Botanical Gardens on October 12, 1922 (Kuerzi). Another began singing in Rye, Westchester County, during the last days of September, 1935, and was seen and heard intermittently in the same row of elms until October 13 (Cruickshank).

COMPSOTHTLYPIDAE: WOOD WARBLERS

Black and White Warbler

Mniotilta varia (Linnaeus)

The Black and White Warbler is eminently a species of the deciduous woodlands and is particularly adapted for its life of scanning the branches and trunks of trees. Wherever there are stretches of rich woods in the New York City region this species is a common summer resident, but it decreases in

numbers as one approaches the metropolis and is generally rare as a breeder within the city limits. During the nesting season it is uncommon to unknown in most of the scrub oak areas of Long Island and is rather rare on the Orient peninsula, yet several pairs even nest on Gardiner's Island. Along the outer strip of Long Island the species is known only as a fairly common transient visitant. Elsewhere throughout the region it is very common to abundant during migrations wherever there are trees and tall bushes.

The Black and White Warbler has arrived in Bronx County as early as April 13, 1924 (L. N. Nichols), and on several occasions in our region as early as April 18 or 19. April 22 is, however, a much more normal arrival date, with the bulk of migrants passing through during the first two weeks in May. At the peak of this northward movement I have counted sixty-seven individuals in a day of vigorous birding in Westchester County, and higher counts are undoubtedly possible. Stragglers are passing through into early June. The bird places its nest on the ground in some natural nook under a log, at the base of a tree, or in the side of a bank. There are one or two broods, local egg dates concentrated in late May, with extremes May 11 and June 28. A few southbound birds appear as early as the last half of July, but it is generally the first week in August before a definite movement sets in. This southward migration extends into October, with the peak of fall abundance coming late in August or early September. After mid-October the Black and White Warbler is decidedly rare, yet I find dates as late as November 6, 8, 9, and 14, the last in Central Park in 1908 (A. Crolius).

Prothonotary Warbler

Protonotaria citrea (Boddaert)

This beautiful warbler is very partial to trees overhanging streams and lakes. In our region it is an extremely rare

spring transient, a purely casual fall transient and has bred at least twice. Though chiefly a bird of the southern cypress swamps, it has recently been found nesting as far north as Michigan and Buffalo, and if this extension of its breeding range continues we will unquestionably get more records locally. The bird was found nesting along the Passaic River between Caldwell and Pine Brook, New Jersey, June 30, 1924 (Quattlebaum *et al.*). A pair was discovered building a nest in an old tin can three feet above the ground in the same general area, May 9, 1925 (Van Deusen). This area has been destroyed, but there are several summer records for adjacent areas along the river, and it is possible that the species has bred more than twice.

Though the Prothonotary Warbler is a very rare bird in our region, years of intensive field work by hundreds of observers have supplied us with many records for most areas, and I can see no point in listing them in detail. The large majority of records are naturally concentrated around the metropolis where the most intensive birding is done. I find forty-two spring records for our region, the earliest from Bronx Park, April 25, 1931 (Bronx County Bird Club), and the large majority grouped in early May. The bird has been seen in Westchester County as late as June 6, 1924 (Coles). Summer records for New Jersey have already been discussed. The species is so rare in fall that there are only four records for this season: one banded at Elmhurst, Long Island, August 18, 1936 (Mrs. Beals); one seen in Inwood Park, Manhattan, August 22, 1936 (Norse); one collected at Montauk, Long Island, August 26, 1886 (Dutcher); one seen at Bayside, Long Island, September 22, 1933 (McBride).

Worm-eating Warbler

Helminthos vermivorus (Gmelin)

The Worm-eating Warbler is generally found in dense undergrowth on heavily wooded hillsides. It is excessively

secretive, is astonishingly inactive for a warbler and unless one knows its song, which is slightly more buzzy than that of the Chipping Sparrow, it will invariably go unnoticed.

The species breeds commonly in the wooded hill country of Rockland County and the northern two-thirds of Westchester County but decreases abruptly south of White Plains and is at present casual as a breeder in Bronx County. Until recent years a few pairs bred in Inwood Park on Manhattan. In New Jersey it is a common summer resident on the east slope of the Palisades, on the Watchung ridges and in the hilly country to the west of them. On Long Island the Worm-eating Warbler is an extremely rare and erratic breeder on the wooded slopes along the north shore between Bayside and Port Jefferson. Wherever the species does not breed in our region it is known only as an astonishingly rare transient visitant. It is naturally rarest on Long Island and is actually casual along the south shores of both Nassau and Suffolk Counties.

As the Worm-eating Warbler is very rare before May 10, I admit my total inability to explain three extraordinary spring dates: Englewood, April 14, 1913 (J. T. Nichols); Central Park, April 19, 1909 (Griscom and LaDow), Jones Beach, April 20, 1934 (Vogt). The species usually arrives on its breeding grounds in a marked wave between May 10 and 15. A week later the peak of maximum abundance for the entire year is reached, and at this season I have estimated over fifty in a day along the Elmsford Ridge in Westchester County. Away from the breeding grounds, even in the most favored localities, a count of more than two on any one day is exceptional. Stragglers are passing through up to June 6. The bird nests on the ground. There is but one brood, local egg dates concentrated in late May and early June, with extremes May 21 and June 22. Fall migration evidently begins very early as birds are definitely on the move during the last week in July. The southward movement is generally so

light that it frequently goes undetected. By the end of August most of our Worm-eating Warblers have departed, and records after September 10 are few. I find two reports for very abnormal dates: Westchester County, October 2, 1925 (Coles). Bronx Park, October 11, 1936 (Lehrman).

Golden-winged Warbler

Vermivora chrysoptera (Linnaeus)

The Golden-winged Warbler is very partial to shrubby fields sprinkled with tall bushes and bordered by woods. It is a common summer resident in the highlands of Rockland County and a much less common summer resident in the northern sixth of Westchester County. In New Jersey it breeds commonly throughout the higher parts of Sussex, Passaic, Bergen, Warren and Morris Counties and sparsely southeast to northwestern Essex County. Elsewhere throughout the region, even just south of its breeding grounds, it is an astonishingly rare transient visitant. It is rarest on Long Island, and often is unrecorded for an entire year along the south shore east of Lynbrook. Years of intensive birding have, however, given us numerous records for all counties and I can see no point in listing them.

The Golden-winged Warbler has been recorded in Prospect Park, Brooklyn, as early as April 29, 1923 (Walsh), at Troy Meadows, New Jersey, as early as April 30, 1933 (Lind), and in Bronx Park as early as April 30, 1939 (Norse). The bird is, however, always rare before May 10 and away from the breeding grounds is usually recorded only during the height of migration around the middle of the month. At this season I have seen over thirty in a day in northern Rockland County, but away from the breeding grounds an observer is always thrilled to find a single individual. One straggler has been recorded at Idlewild, Long Island, as late as June 11, 1938 (Mayer). The bird usually places its nest on the ground. There are one or two broods, local egg dates ranging from

May 18 to June 27. Vagrants show up from time to time throughout July in localities where the species does not breed. With the opening days of August a definite southward movement sets in, and most of the birds pass through during the last half of this month. After mid-September the species is purely casual, the two latest records: Central Park, October 3, 1907 (Crolius), and Kensico, Westchester County, October 6, 1935 (Cruickshank).

Blue-winged Warbler

Vermivora pinus (Linnaeus)

The Blue-winged Warbler is a bird of hedgerows, scrubby fields and woodland borders, showing a marked preference for the drier areas where brier thickets abound. Though a common summer resident over the larger part of our region, its distribution requires some elaboration. It is a very common summer resident over most of Rockland and Westchester Counties. Though gradually disappearing as a breeding bird in all densely populated sections, it still nests within the New York City limits. Since the beginning of the century it has increased in most rural sections of eastern New Jersey and has extended its range north and westward in the state, yet it is virtually absent from the higher elevations, appearing again in the valley region between the Highlands and the Kittatinny Mountains. The most pronounced change has taken place on Long Island. In 1910 it bred commonly only in northern Queens and Nassau Counties, but since then it has rapidly spread to the south and east and is now a common summer resident over the larger part of the mainland as far east as Southampton and Port Jefferson and even breeds at scattered points farther east to Gardiner's Island and Montauk. On the outer strip of Long Island and in the mountains of northwestern New Jersey the species is known only as an uncommon to rare transient visitant. Elsewhere throughout the region it is common to abundant during migrations.

The Blue-winged Warbler has been recorded on several occasions as early as April 25 and 26, but it is normally the first week in May before the species arrives, and always the middle of May before a spring peak is reached. At this season I have seen over one hundred Blue-winged Warblers in a vigorous day of birding in Westchester County. By May 25 migration is virtually over, but stragglers are passing through up to June 14. The bird nests on the ground. There is apparently but one brood, egg dates concentrated in the last half of May, with extremes May 11 and June 24. Fall migration commences as early as the last week in July and is usually terminated by the end of August. Very few linger into September. One remained at Idlewild, Long Island, as late as October 6, 1937 (Mayer). There is one phenomenal record: a fresh specimen picked up in the Bronx Botanical Gardens on January 6, 1900 (Mrs. Britton).

Brewster's Warbler

Vermivora leucobronchialis (Brewster)

Lawrence's Warbler

Vermivora lawrencei (Herrick)

After years of controversy as to the status of these two birds it is now generally accepted that they are merely fertile hybrids between the Blue-winged and Golden-winged Warblers. We are in a particularly favorable region to see these crosses as they are produced chiefly in such localities as New Jersey, Rockland County and Westchester County where the ranges of their parents overlap. Naturally they are much rarer birds than either of their parents and the Lawrence's Warbler, possibly the carrier of the recessive alleles, is supposed to be rarer than Brewster's Warbler though a careful analysis of all local records seems to belie this contention. Even though they are extremely rare, each additional year of intensive birding adds more and more records of transients

of both hybrids for our region, and I can see no point in listing all such occurrences in detail. On the other hand there is still a great deal of work to be done on these birds. I suggest that local students try to gather detailed information as to whether mere altitude or additional ecological factors govern their distribution, what percentage of mixed pairs occur in the zone of overlap, and what correlation there is between song and color characters.

An analysis of all available data indicates that they have migration periods closely parallel to their parents, and that they are rarest on Long Island where a year may well pass without a record for either hybrid. The Lawrence's Warbler has arrived at Boonton, New Jersey, as early as May 4, 1931 (Carter), and has been seen in Bronx Park as late as September 10, 1925 (Kuerzi). It has been found nesting in northern Queens County, in Bronx County in both Bronx and Van Cortlandt Parks, in Westchester County at Grassy Sprain, Chappaqua and Briarcliff Manor, and in New Jersey at Englewood, Boonton, Great Swamp and Little Falls. The Brewster's Warbler has occurred in Bronx Park as early as April 28, 1935 (Gell-Mann), and has lingered at Short Hills, New Jersey, as late as September 29, 1938 (Chalif). It has been found breeding in Westchester County at Grassy Sprain and in New Jersey at Englewood, Wyanokie, Flatbrookville, Great Swamp and on the Waywayanda Plateau.

Tennessee Warbler

Vermivora peregrina (Wilson)

Though the Tennessee Warbler shows a slight preference for moist woodlands, it occurs as a transient in our region wherever there are trees and tall bushes. Formerly it was rare or unknown in spring but occasionally not uncommon in fall. There was only one spring record for Long Island prior to 1908, no spring records for Central Park prior to 1902, and

no spring record for the regularly worked Englewood area prior to 1905. Since 1912 there has been a marked increase, and the species is now a regular transient visitant, generally uncommon in spring, usually common in fall. It is widely distributed throughout our region but is decidedly least common, especially in spring, in Nassau and Suffolk Counties.

The Tennessee Warbler has been seen at Port Jefferson, Long Island, as early as May 1, 1927 (R. Murphy), and there are now many records from widely separated points for the first week in this month. The bird is, however, always rare before May 10 and is usually recorded only on the days of the biggest warbler waves in the middle of the month. In spring it is never found in large numbers, and a count of three or four on any one day is the maximum one may expect. Migrants are irregularly passing through up to the end of the first week in June. Southbound birds have been seen in Bronx County as early as August 9, 1923 (Griscom), but the fall movement ordinarily does not reach our region until the middle of August and is never at maximum strength until the closing days of this month or early September. At this season the Tennessee Warbler is often common, and I have estimated seeing over forty in a day in Westchester County. After the end of September the bird is purely casual, yet I find over a dozen records for October, the two latest from Bronx County, October 17, 1921 (Griscom), and October 20, 1927 (L. N. Nichols).

Orange-crowned Warbler

Vermivora celata celata (Say)

Even though the Orange-crowned Warbler has shown a slight increase in our region since 1926, it is still rare as a fall transient, very rare as a spring transient and extremely rare in winter. During migrations it shows no preference for any particular type of habitat, trees or bushy thickets apparently being its only demand, but most of the wintering

individuals have been found in dense clumps of conifers. Though rare throughout the region, years of intensive birding have given us many records for most major localities, and there is nothing to be gained by listing a quantity of them.

I find records by very reliable and experienced observers for Central Park as early as August 10, 1931 (F. E. Watson and Berliner), and August 22, 1930 (F. E. Watson and Carter), and there is a light sprinkling of records for the remainder of this month and September. The Orange-crowned Warbler is, however, principally an October transient, and the majority of all our records are grouped in this month. As the bird is rather common in winter as far north as coastal South Carolina it is not surprising that we should have nine December and six January records representing Staten Island, Long Island, Manhattan, Bronx County, Westchester County and eastern New Jersey. Most of these records have already been published, and I can see no point in repeating the details. There are no February records. As the bird's normal migration route is up the Mississippi Valley it is always very rare in our region at this season. Records such as Staten Island, March 8, 1924 (Kuerzi); Long Island, April 13, 1919 (Helme); West Orange, New Jersey, April 14, 1898 (Van Rensselaer); Jones Beach, Long Island, April 21, 1932 (Vogt *et al.*) undoubtedly represent birds that wintered just to the south of us. In spring the species is ordinarily recorded only during the biggest warbler waves in mid-May and then usually singly. The latest spring date is from Westchester County, May 22, 1928 (Cruickshank).

Nashville Warbler

Vermivora ruficapilla ruficapilla (Wilson)

The Nashville Warbler breeds commonly in two entirely different types of habitat: one, moist open woodlands, the other, very dry areas with low second growth. Throughout

the larger part of the New York City region the bird is known only as a fairly common transient visitant, and as such it occurs wherever there are trees and bushes. Like a great many transients it is least common on Long Island, especially along the southern shores of Nassau and Suffolk Counties. The species breeds sparsely in New Jersey in Sussex, Passaic, Morris and Warren Counties and has been suspected of breeding in the northwestern corner of Bergen County. It breeds sparsely in the higher sections of Rockland County and undoubtedly has bred in northern Westchester County, as numerous observers have seen and heard birds there all during June and July and have found nests just over the border in Putnam County and Connecticut.

The Nashville Warbler has arrived in Central Park as early as April 21, 1919 (Hix), and at widely separated points on numerous occasions during the last week in this month. May 3 is, however, a much more normal arrival date, and maximum abundance is seldom reached before the middle of this month. This species rarely occurs locally in large numbers, and even during the peak of migration it is unusual to record over a dozen individuals on any one day. Migration is normally finished by the end of May, but a few stragglers irregularly pass through until the middle of June. The bird nests on the ground. There is apparently but one brood locally, the few egg dates grouped between May 18 and June 17. One bird, apparently southbound, arrived in East Hampton, Long Island, as early as July 31, 1929 (Helmuth). This date is unusual as it is ordinarily mid-August before there are indications of a return movement and always early September before a widespread wave occurs. By mid-October migration is normally concluded, yet I find the following remarkable records: Englewood, New Jersey, November 16, 1907 (Griscom); Central Park, November 30, 1937 (Cantor); Bronx County, December 16, 1917, to January 9, 1918, and December 2 to 4, 1924 (Chubb).

Northern Parula Warbler*Compothlypis americana pusilla* (Wilson)

This smallest of all our warblers is a common to abundant transient visitant throughout the New York City region wherever there are trees and bushes, but it is decidedly more particular during the breeding season, demanding wooded bogs, moist woodlands, the edges of ponds or lakes, and generally only nesting in such areas having a rich growth of *Usnea* lichen. As a breeding bird it has disappeared almost entirely from our region. Formerly a common local summer resident over the eastern half of Long Island and on the north shore as far west as Oyster Bay, it rapidly decreased with the disappearance of the *Usnea* lichen and is now probably extirpated. Six pairs nested on Gardiner's Island in 1924, but none has been found there since 1932. Twenty pairs nested on Shelter Island in 1925, none since 1934. The last breeding record for Long Island to my knowledge is from Hither Woods in 1938 (Helmuth). There are no positive breeding records for the remainder of our portion of New York State, although a few singing males have been found in northern Westchester County and Rockland County in summer, and the species may well have bred. In New Jersey it was formerly a rare and very local breeder in the bogs of the Kittatinny Mountains and the Waywayanda Plateau, but none has been found nesting there in recent years.

The Parula Warbler has been recorded in Prospect Park, Brooklyn, as early as April 14, 1941 (Breslau), and in Central Park as early as April 21, 1919 (Hix), and there are now records for every day during the last week in this month. The bird normally arrives, however, in a widespread wave early in May and reaches a peak during the second week of this month. At this season it is one of our most common birds, and I have estimated seeing several hundred during a vigorous day of birding in Westchester County. By June most of the

Parula Warblers have departed for their northern breeding grounds, yet individuals occasionally linger to the middle of the month, one in Central Park as late as June 26, 1934 (Carleton). The nest is usually made of *Usnea* lichen, occasionally of grasses and finely-shredded bark, and is suspended from a branch from four to sixty feet from the ground. In our region there is evidently but one brood, the few local egg dates before me ranging from May 17 to June 13. Southbound birds are generally rare in August, although individuals appeared in Prospect Park, Brooklyn, as early as August 2, 1912 (Victor). The species ordinarily arrives in a pronounced wave during the first ten days in September, and the bulk of birds passes through during this month. After October 12 the Parula Warbler is a very rare bird, the two latest records: Englewood, New Jersey, November 4, 1913 (Helmuth); Man- orville, Long Island, November 18, 1936 (Raynor).

Eastern Yellow Warbler

Dendroica aestiva aestiva (Gmelin)

The Yellow Warbler is a bird of the open country, being partial to low shrubbery in gardens and along the edges of swamps, streams and lakes. Wherever such habitat occurs in the New York City region, from the mountains of north-western New Jersey to the very edges of the coastal marshes of Long Island, the species is a very common summer resident. It even nests at scattered points along the outer strip. As might be expected, there has been a slight decrease in the ever-expanding suburbs, but the bird is very tolerant and many pairs still nest within the boundaries of the metropolis. During migrations the species is a common transient visitant wherever there are low trees or bushes.

The Yellow Warbler has occurred on several occasions as early as April 18 and 19 and on numerous occasions during the last five days of the month. May 2 is, however, a much



more normal arrival date for the first widespread wave, with the peak of the spring flight coming about ten days later. At this season in the best stretches of habitat one may occasionally see over fifty individuals in a day. By the end of May migration is virtually concluded, only stragglers passing through up to the middle of June. The bird usually places its silvery nest in a bush less than six feet from the ground. There are one or two broods, local egg dates concentrated in the last week in May, with extremes May 10 and June 24. Fall migration is astonishingly inconspicuous. It starts as early as the last week in July and is usually concluded by the end of August. After this month the species is decidedly rare, a few birds irregularly appearing in flocks of other warblers in September. The three latest records are: Elmhurst, Long Island, October 5, 1936 (Beals); Central Park, New York City, October 5, 1921 (Carter and Griscom); Essex County, New Jersey, October 12, 1923 (Montclair Bird Club).

Magnolia Warbler

Dendroica magnolia (Wilson)

The Magnolia Warbler is particularly fond of low vegetation around the margins of coniferous woodlands and during the breeding season is virtually confined to this type of habitat. During migrations it is, however, not at all meticulous and is one of our most common transients wherever there are trees and bushes. As is true of the great majority of warblers, it is least common in Nassau and Suffolk Counties, yet it occurs regularly even on the outer strip. As a breeding bird it is confined to the Kittatinny Mountains and the Waywayanda Plateau in northwestern New Jersey, and though very sparsely distributed it is not by any means as rare as was formerly supposed.

The Magnolia Warbler has occurred in Manorville, Long Island, April 27, 1936 (Raynor), in Oyster Bay, Long Island,

April 28, 1935 (Swope), and in Union County, New Jersey, April 30, 1925 (Umer). The species ordinarily does not arrive until May 10, however, and seldom reaches a spring peak until the third week of this month. At the peak of the spring flight I have seen over one hundred individuals in a day. Migration is usually concluded by the end of May, yet stragglers irregularly pass through up to the middle of June. The bird places its nest in a low conifer less than ten feet from the ground. I find no egg dates for our region, but it is evident that they fall in late May and early June. An exceptionally early fall migrant was trapped and banded at Idlewild, Long Island, on August 4, 1941 (Mayer), and another was seen flying around a Long Island railroad car traveling between Jamaica and Wantagh on August 6, 1938 (Mayer). It is not until the fourth week in August that the species normally arrives, and the majority of birds passes through early in September. After the end of this latter month the species is extremely rare, the latest records from Long Beach, Long Island, October 22, 1916 (Griscom and J. Johnson), and Prospect Park, Brooklyn, October 23, 1911 (Viotor).

Cape May Warbler

Dendroica tigrina (Gmelin)

Although the Cape May Warbler is rather partial to the margins of woodlands, it occurs as a transient wherever there are trees and tall bushes. It was formerly an extremely rare bird in our region in spring, as indicated by only two spring records for Central Park between 1885 and 1909 and only one for the regularly worked Englewood area between 1885 and 1913. In the spring of 1909 there was a marked flight in many sections of the northeast, and by 1915 the species occurred regularly each May. To-day over the larger part of the New York City region it is uncommon in spring and fairly common in fall, but its numbers show marked variations from spring

to spring depending on the quantity and quality of big waves. The bird is least regular in Nassau and Suffolk Counties, and along the south shores of these two areas it often is unrecorded during the northward flight.

The Cape May Warbler has been seen in Bronx Park as early as April 29, 1938 (Gell-Mann), and in Westchester County as early as May 2, 1933 (Ogburn), but such dates are extremely abnormal, as the bird is rare before May 10 and is usually not recorded until the biggest waves during the third week of the month. One generally considers oneself fortunate to see one or two Cape May Warblers in any one day in spring, but during remarkable flights I have seen as many as twenty-one during a vigorous day of birding in Westchester County. After May 24 the species is extremely rare, yet stragglers have lingered to June 5. In fall the Cape May Warbler is much more common, and at this season it even occurs regularly along the outer strip of Long Island. A few commence to trickle into our region during the second week in August, but the first widespread wave seldom arrives before the closing days of the month, and the fall peak is not reached until mid-September. At this season it is widely distributed, and anyone capable of identifying the fall birds will see flocks of ten to twenty annually. After the first week in October the species is extremely rare, yet one was seen at Long Beach, Long Island, as late as October 28, 1917 (Rogers). A record of one at Hewlett, Long Island, December 5, 1916 (Bicknell), is phenomenal.

Black-throated Blue Warbler

Dendroica caerulescens caerulescens (Gmelin)

The Black-throated Blue Warbler, though particularly fond of wooded hillsides covered with dense undergrowth, is a common transient visitant over the larger part of our region wherever there are trees and bushes. It is least common in

Suffolk County and on the outer strip of Long Island, yet it occurs regularly in both places. In New Jersey the bird breeds very sparsely in the Kittatinny Mountains and the Highlands, a few as far south as Bowling Green in Morris County. In our portion of New York State it is confined as a breeder to the highest sections of northern Rockland County where it is decidedly scarce. It is conceivable, however, that a few birds have bred along the northern rim of Westchester County as the species nests regularly just to the north in parts of Putnam County.

The Black-throated Blue Warbler has been seen in Central Park as early as April 25, 1921 (Granger), and in numerous localities during the last few days of this month, but it is ordinarily not recorded until the first marked wave in early May and never reaches a spring peak until the middle of the month. At this season I have recorded as many as forty-six individuals in a day in Westchester County, and higher counts are undoubtedly possible. By May 25 transients become scarce, and only a few stragglers are passing through up to the second week in June. The nest is usually placed in a shrub less than six feet from the ground. I have been unable to uncover any local egg dates, but it is apparent that they range from mid-May to at least mid-June. Individuals have appeared in Oyster Bay, Long Island, as early as August 11 (specimen in the U. S. National Museum), and in Inwood Park, New York City, August 14, 1938 (Norse), but these dates are very early, as transients seldom arrive before early September and a fall peak is never reached until the last half of this month. The Black-throated Blue Warbler has the reputation of being much less common in fall, but I have never found this to be the case and suspect that in reality it is only overlooked due to the dense autumn vegetation, the bird's silence and the drab plumage of the females and young. After mid-October the species is purely casual. I find the following extraordinary records: Long Island, November 30

(*vide* Griscom); Irvington, Westchester County, November 27 to December 9, 1906 (Dunham), the bird found dead on this latter date and sent to the American Museum; Montauk Point, Long Island, December 11, 1938 (Helmuth, McKeever and Sedwitz).

Myrtle Warbler

Dendroica coronata (Linnaeus)

The Myrtle Warbler is one of our most abundant and widely distributed transients and is the only member of its family to winter commonly, though locally, in the New York City region. During migrations it is not at all particular about habitats and the ubiquitous flocks flood the city parks, gardens, dense woods, hedgerows and low growth along the coast. When winter approaches, however, the species through necessity becomes very particular, selecting dense beds of bayberry, poison ivy and thickets of red cedar. It is therefore extremely local at this season and is especially common along the coastal strip of Long Island where acres and acres of bayberry are to be found. Its distribution and abundance for any one winter, moreover, depend on the crop of berries. Some years it is common even along both shores of the Sound, in the lowlands of New Jersey, and in the interior of Westchester County. Other years it is unrecorded in winter throughout the interior and is extremely local and uncommon even along the coast.

The Myrtle Warbler is purely casual in August, yet birds have been found in Plainfield, New Jersey, as early as August 13, 1921 (Miller), and in Central Park as early as August 19, 1922 (Griscom). The species ordinarily arrives in a marked wave shortly after the middle of September, and for the next month and a half wave upon wave passes through. At this season it is not unusual to find flocks of over one hundred, and occasionally concentrations of many hundreds. After mid-November the Myrtle Warbler disappears from most

inland locations. Along the coast, however, over one hundred in a day may often be seen in winter if a particular search be made in the extensive bayberry thickets. Throughout the winter there may be light movements, as flocks shift from areas where the food supply has given out. The spring migration is divided into two entirely separate movements. Pronounced coastal migrations take place from the end of February to the end of March, and one working near the shore will frequently see flocks flying high overhead towards the northeast. There is no comparable movement away from the narrow coastal strip. In early April the second movement starts, with a few brightly-colored singing males appearing throughout the region in the flocks of Yellow Palm Warblers. By the middle of April large flocks are again passing through, and the spring peak is reached during the last week of the month. Though often common or locally abundant at this season, the large concentrations of the fall are never equaled. The Myrtle Warbler becomes rare by the middle of May, stragglers irregularly linger to the end of the month, and the two latest records are Elmhurst, Long Island, June 9, 1939 (Beals), and Westchester County, June 12, 1926 (Coles).

Townsend's Warbler

Dendroica townsendi (Townsend)

Dr. William T. Helmuth, one of our veteran observers of wide experience, feels certain that he saw an individual of this species at East Hampton, Long Island, August 18, 1934. He had previously seen this species in the west and undoubtedly his observation is correct but he requests "if the species be mentioned at all that it be relegated to the hypothetical list." (For complete details see *Proceedings of the Linnaean Society*, No. 47, p. 128.) This western species has been reported as seen in Massachusetts and has once been collected in Pennsylvania.

Black-throated Green Warbler*Dendroica virens virens* (Gmelin)

The Black-throated Green Warbler, though particularly fond of tall conifers, occurs as a common to abundant transient visitant throughout the region wherever there are trees and tall bushes. As a summer resident it is decidedly uncommon. It breeds locally in the highlands of Rockland County and in northern Westchester County south to the tall conifers around Kensico Reservoir and occasionally as far south as Tuckahoe. On Long Island pairs are thinly but widely sprinkled north and east of a line stretching from Sea Cliff and Roslyn through Syosset, Melville and Brentwood to Sayville. In New Jersey it is locally common as a breeder in suitable habitat south to Alpine in Bergen County, the Orange and Watchung Mountains in Essex, Union and Somerset Counties, and as far as the Water Gap along the Delaware River.

The Black-throated Green Warbler has been recorded around Hempstead Reservoir, Long Island, on the remarkable date of March 30, 1935 (Mayer), and near Jamaica Bay, Long Island, April 4, 1938 (Imhof). The species seldom arrives, however, before April 22 and does not reach maximum abundance until the first week in May. At this season there are often large waves, and I have estimated seeing over one hundred in a day in Westchester County. By May 20 spring migration is virtually over, yet one straggler was found in Central Park as late as June 13, 1940 (Carleton). The bird usually places its nest in a conifer from three to fifty feet from the ground. There are one or two broods, local egg dates ranging from May 12 to June 21. Vagrants occur from time to time during the summer in localities where the species does not breed. In late August there are occasionally indications of migration, but the species ordinarily arrives in a marked wave immediately after the first cold snap in early September and reaches a fall peak late in the month. After



the middle of October the Black-throated Green Warbler is a very rare bird, yet I find eleven records for November and two for December, the five latest: Jones Beach, Long Island, November 20, 1939 (J. Elliott); Bronx County, November 20, 1928 (Chubb); Hartsdale, Westchester County, November 21, 1940 (Openhym); Bayside, Long Island, December 1, 1937 (Skopec); Long Beach, Long Island, December 9, 1939 (Mayer).

Cerulean Warbler

Dendroica cerulea (Wilson)

The Cerulean Warbler is rarely found away from the tops of tall deciduous trees. It was discovered nesting just north of us in Dutchess County, New York, in 1922, and it has subsequently shown a slight increase there. In 1932 as many as eleven pairs nested on the grounds of the Leake and Watts School at Tivoli (Hickey).

In our region the bird is an astonishingly rare or casual transient. I know of only four reliable records for Long Island: a specimen collected years ago in Brooklyn; one seen at Orient, May 28, 1925 (Latham); one at Saint James, May 7, 1934 (Raynor); one at Alley Pond, May 11, 1941 (Bohn, Fischer, Skopec). I find the following four records for Central Park: May 5, 1885 (Dutcher); May 11, 1927 (Griscom); August 3 and 6, 1937 (Carleton); September 15, 1923 (Boulton). There are two records for Bronx County, May 14, 1921 (Weigmann), and May 27, 1926 (Cruikshank). Both Westchester records are from Chappaqua: May 18, 1940, and September 21, 1941 (Pangburn). In New Jersey specimens have been taken at Boonton, September 1, 1887 (Judd), and at Palisades Park, September 25, 1909 (J. Weber). In addition I find four recent sight identifications: Wyanokie, June 5, 1927 (Howland), and Elizabeth, September 18, 1921; September 23, 1928; October 2, 1927 (Urner).

Blackburnian Warbler*Dendroica fusca* (Müller)

The Blackburnian Warbler, though preferring mixed coniferous and deciduous woodlands in which to nest, is widely distributed during migrations, occurring wherever there are trees and tall bushes. It is a fairly common transient visitant in all sections of our region except in Nassau and Suffolk Counties where it is uncommon and along the coastal strip where it is decidedly rare. In New Jersey the bird breeds uncommonly in the hemlocks of the Waywayanda Plateau in Sussex and Passaic Counties. In our portion of New York State the few breeding birds are confined to the highlands of northern Rockland County, but it is conceivable that a pair or two might nest along the northern border of Westchester County as the species breeds sparsely just over the line in Putnam County.

The Blackburnian Warbler has been seen in Essex County, New Jersey, as early as April 19, 1929 (Wolfarth), and April 23, 1927 (Haülenbeek), and in Brooklyn, New York, April 23, 1939 (J. Elliott). Such dates are, however, very abnormal as the species is rare before May 9. The peak of the spring flight comes with the biggest waves in mid-May, and at this season I have seen as many as eighteen in a day along the Elmsford Ridge in Westchester County. A count of three to eight even at the height of migration is, however, ordinarily all one may expect. By the end of May migration is virtually concluded, yet one bird lingered at Elmhurst, Long Island, until June 8, 1939 (Beals). The nest is usually placed in a conifer and usually over twenty feet from the ground. Locally there is apparently but one brood, the few egg dates before me ranging from May 28 to June 6. Southbound birds have arrived in Central Park as early as August 3, 1908 (Griscom). August 22 is, however, a much more normal arrival date, and the bulk of birds passes through during the first ten days in

September. There are very few records for October, the latest from Hewlett, Long Island, October 18, 1940 (Cruickshank).

Yellow-throated Warbler

Dendroica dominica dominica (Linnaeus)

A casual visitant from the south. The seven Long Island records are as follows: a specimen collected in Brooklyn years ago ("Birds of the New York City Region"); Prospect Park, April 28 and 29, 1917 (Fleischer and L. N. Nichols); Orient, June 2, 1924, and one other but date lost (Latham); Oyster Bay, July 4 to 8, 1907 (T. Roosevelt); Sag Harbor, July 4 to 15, 1933, collected (Wilcox); Hewlett, April 27 and 28, 1939 (Claffin, Arbib and Harrower). I find two records for Central Park: April 17, 1919 (E. Eliot and Miller); April 29 to May 1, 1926 (scores of observers). There are two records for Westchester County: Mamaroneck, May 18 to 21, 1925 (Coles); Grassy Sprain, May 28, 1933 (Sedwitz). The records for our section of New Jersey are: Newark, May 1, 1928 (Burnett and Loomis); Troy, May 5, 1935 (Mr. and Mrs. Rich); Essex County Reservation, May 15, 1925 (Urner). It is possible that some of these records refer to the Sycamore Warbler.

Sycamore Warbler

Dendroica dominica albilora Ridgway

This Mississippi Valley race of the Yellow-throated Warbler has been collected several times in the Northeast. A report of one seen in Prospect Park, Brooklyn, April 30, 1940 (Nathan and Russell), seems to be well authenticated.

Chestnut-sided Warbler

Dendroica pensylvanica (Linnaeus)

The Chestnut-sided Warbler is essentially a bird of low second growth, being partial to hedgerows, scrubby fields, the margins of country roads, and brier thickets. Though a very



rare bird up to a century ago, it is now common on migrations everywhere throughout the New York City region except along the extreme south shore of Nassau and Suffolk Counties where it is decidedly uncommon to rare. It breeds commonly in the rural districts of New Jersey, Rockland County and Westchester County but decreases southward and eastward towards the coastal plain. Moreover, it is steadily decreasing in the ever-expanding suburbs, and very few pairs still nest around the outskirts of the metropolis. On Long Island where until a few decades ago it was confined to the north shore it has spread remarkably through Nassau and Suffolk Counties and now breeds fairly commonly in most rural districts north of the Montauk highway. The bird decreases slightly to the eastward, yet pairs even nest along the Orient peninsula and on Gardiner's Island.

The Chestnut-sided Warbler has been recorded in Westchester County as early as April 26, 1925 (Coles), and there are many records for the last few days of this month, but May 3 is a much more normal arrival date, with the peak of migration coming about ten days later. At this time I have recorded as many as sixty-seven individuals in a vigorous day of birding in Westchester County, and higher counts are undoubtedly possible. By May 26 most of the transients have departed, yet stragglers linger into June, and one was recorded in Central Park as late as June 26, 1901 (Chubb). The bird nests in a low bush less than six feet from the ground. There are one or two broods, local egg dates concentrated in late May, with extremes May 14 and July 12. Vagrants irregularly show up from time to time throughout the summer in localities where the species does not nest. The first definite autumn flight usually comes around August 22, and by September 25 most of the birds have departed for the south. The latest records are Sheepshead Bay, Long Island, October 9, 1932 (Cruickshank), and Westchester County, October 9, 1922 (Coles).

Bay-breasted Warbler*Dendroica castanea* (Wilson)

The Bay-breasted Warbler is a bird of the woodlands, showing a marked preference for conifers. On migrations it is, however, not meticulous about habitat and occurs wherever there are trees. There has been a marked increase during the current century, and to-day it is a fairly common transient visitant throughout the region, with the exception of Nassau and Suffolk Counties where it is uncommon to rare and on the outer strip of Long Island where it is purely casual.

One bird arrived at Englewood, New Jersey, on May 1, 1904 (C. Rogers). The Bay-breasted Warbler is, however, decidedly rare before May 10 and is never common until the fourth week in this month. At this time one may regularly find groups of four to eight feeding high in a tree, and during unusual waves in Westchester County I have counted as many as thirty-two in a day. After June 8 the bird is purely casual, yet Griscom mentioned one record for Long Island as late as June 23, 1870. The southward migration often starts very early. Birds have arrived in Bronx County as early as July 25, 1919 (Kuerzi), and July 26, 1875 (Bicknell), and there is a light sprinkling of dates for the first half of August. The first pronounced movement sets in around August 20, and by the second week in September most of the birds have departed to the south. Stragglers have lingered in Union County, New Jersey, as late as October 12, 1925 (Urner), and one was collected in Bronx County, October 13, 1876 (Bicknell).

Black-poll Warbler*Dendroica striata* (J. R. Forster)

The Black-poll Warbler, though very partial to tall coniferous woodlands, occurs commonly and at times abundantly as a transient visitant throughout the New York City region

wherever there are trees and bushes. It is even a fairly common transient visitant on the outer strip of Long Island.

The bird has arrived at Orient, Long Island, as early as May 2, 1920 (Latham), and in Central Park as early as May 3, 1911 (Griscom). It is, however, ordinarily May 10 before any major flight takes place, and two weeks later before the peak of spring abundance is reached. At this time large flocks often flood the woodlands, and counts of over one hundred in a day are possible. The Black-poll Warbler is the only transient member of its family to remain regularly in numbers into June, and pronounced waves are sometimes passing through as late as June 6. Stragglers frequently linger into the middle of the month, and I find records for Bronx County, July 5, 1886 (Bicknell), and Essex County, New Jersey, July 11, 1930 (Howland). There are several August reports for this species, but all are inconclusive and are rejected. In fact, the bird is a late fall migrant, the earliest unquestionable record being one collected at Englewood, New Jersey, August 30, 1887 (Chapman). The species ordinarily arrives in a marked wave around September 10 and is normally abundant to mid-October. After this date numbers fall off rapidly, and the bird is casual by the last week in the month. The two latest records are Prospect Park, Brooklyn, November 13, 1908 (Victor), and Orient, Long Island, November 20, 1913 (Latham). A specimen picked up dead at Montauk, Long Island, in early April, 1941 (Helmuth), is unique.

Northern Pine Warbler

Dendroica pinus pinus (Wilson)

Over the larger part of the New York City region the Pine Warbler is known only as an uncommon spring and a rare fall transient visitant. During migrations it is a possibility wherever there are trees and tall bushes, but once the breeding season sets in the species becomes very particular, usually demanding extensive areas of tall pines. In our section of New

Jersey it is a very local summer resident in the highlands of Sussex County and in the pine lands of Monmouth County. In our section of New York State it is now very thinly distributed as a summer resident in the taller pine groves of Suffolk and southeastern Nassau Counties, and in 1939 a pair bred as far west as Valley Stream. A few irregularly nest in Westchester County.

The Pine Warbler has been recorded in Union County, New Jersey, as early as March 18, 1923 (Urner), and there are now numerous records for late in this month. The species ordinarily arrives, however, during the first week in April and is most frequently found amongst the flocks of Yellow Palm Warblers and Kinglets. Ordinarily if one sees as many as ten to fifteen individuals in a spring one considers oneself fortunate, but periodically there are astonishing waves, and on such occasions I have seen as many as sixteen Pine Warblers in a day. After the first week in May the bird is confined to its breeding grounds. The nest is usually placed in a pine over twenty feet from the ground. Locally there seems to be but one brood, the few egg dates before me ranging from May 4 to June 12. In the fall the bird is extremely rare. One individual arrived in Central Park as early as September 11, 1931 (F. E. Watson), but it is ordinarily the last week in this month before any movement begins. There are records sprinkled throughout the fall and even into December, the three latest: Morristown, New Jersey, December 25, 1920 (Caskey); Syosset, Long Island, December 30, 1928 (J. T. Nichols), and Montauk Point, Long Island, February 14, 1937 (Mr. and Mrs. Rich).

Prairie Warbler

Dendroica discolor discolor (Vieillot)

This is one of the few warblers that is more abundant as a summer resident on Long Island than elsewhere in our

region. It breeds commonly in all of the scrub oak and pine barren areas of Nassau and Suffolk Counties, and sparsely as far west as Port Washington, Hempstead and Valley Stream. In recent years it has shown a marked increase in many sections away from Long Island. It now breeds fairly commonly in northern Westchester and Rockland Counties, and locally in Bergen and Passaic Counties. In all of these areas it usually nests on dry hillsides, especially where cedars are scattered amongst tangles of brambles. The bird nests commonly in the pine lands of Monmouth County and just to the south of us in the pine barrens of New Jersey. As a transient it is fairly common everywhere in our portion of New York State, and in the Hudson River Valley in New Jersey, but it becomes less and less regular westward in New Jersey and is virtually unknown in the highlands of the interior.

The Prairie Warbler has arrived in Bronx Park as early as April 16, 1937 (Norse), and in Hewlett, Long Island, on April 17, 1937 (Lawrence School Nature Club). The species ordinarily arrives in a marked wave during the first week in May and reaches a peak during the middle of the month. At this season I have recorded over forty in a day on Long Island and twenty-one in a day in Westchester County. By the fourth week in May migrants become scarce, and very few stragglers linger into the first week in June. The bird usually places its nest less than six feet from the ground. There is apparently but one brood, local egg dates concentrated in late May and early June, with extremes May 18 and June 22. Vagrants irregularly show up during the summer in localities where the species does not breed. In late August there are often indications that the southward migration is under way, and early in September this movement becomes pronounced. After the end of this month the bird is purely casual, yet there are several records sprinkled through October, the latest from Freeport, Long Island, October 24, 1936 (Cruikshank).

Palm Warbler

Dendroica palmarum palmarum (Gmelin)

This western form of the Yellow Palm Warbler has apparently increased in the New York City region during the current century, for it is now regular during migrations, being rare in spring and uncommon to locally common in the fall. It is partial to the bushy edges of swamps and streams but in the autumn is widely distributed, occurring throughout the region wherever there are trees and bushes.

Such records as Orient, Long Island, March 11, 1937 (Latham), and March 20, 1919 (Mrs. Lowerre), undoubtedly represent birds that wintered just to the south of us as it is usually past mid-April before the species arrives. Though rare in spring, it is now seen annually between April 18 and May 8, and one straggler has lingered at Orient as late as May 23, 1910 (Latham). In the fall the species is much more common. Individuals have arrived at Idlewild, Long Island, as early as August 26, 1935 (Mayer), and in Central Park, August 28, 1941 (Carleton), but it is usually not until the first cool weather in early September that the species may be expected. From mid-September to mid-October the bird is often locally common, and at this season I have seen flocks of fifty or more on Long Island. After October the Palm Warbler is a rare find, yet I find records sprinkled throughout November and December, most of these near the coast and the large majority at the eastern end of Long Island. The four latest records are from Long Island: Hempstead Reservoir, December 28, 1934 (J. L. Chapin and Mahnkin); Speonk, January 13, 1938 (Wilcox); Idlewild, January 14 to 22, 1939 (Mayer); Smithtown, January 28, 1941 (Fischer).

Yellow Palm Warbler

Dendroica palmarum hypochrysea Ridgway

The Yellow Palm Warbler is a common transient visitant, being one of the first members of its family to arrive in the

spring and one of the last to leave in the fall. Though very partial to the low bushes around ponds, marshes and streams and to moist meadows where there are scattered thickets of willows, it occurs throughout the region wherever there are trees and bushes.

Individuals have arrived at Idlewild, Long Island, as early as March 21, 1939 (Mayer), and in Bronx County as early as March 24, 1929 (Bronx County Bird Club), and there are now numerous records for late in this month. The species ordinarily arrives during the first week in April, and the bulk of birds passes through during this month. During the middle of April the species is often very common, and I have seen over one hundred in a day in Bronx and Westchester Counties. On April 21, 1929, a large flight arrived in Central Park, and observers estimated over two hundred in The Ramble. By early May the bird becomes rare, yet individuals have often lingered into the middle of the month, the latest in Prospect Park, Brooklyn, May 27, 1917 (Victor). An exceptionally early fall transient reached Prospect Park on August 28, 1912 (Victor), and another Central Park, September 1, 1931 (F. E. Watson), but the species is decidedly unusual before the last week in September and never arrives in numbers before the closing days of this month. The fall peak is reached during the first half of October, and by the end of this month the species becomes rare, yet there are now too many November and December records to list. All of these winter records are concentrated near the coast, the large majority on Long Island. The latest record for Bronx County is from Clason Point, January 15, 1935 (Malley), the latest for Long Island from near the Hempstead Reservoir, February 26, 1937 (Carleton, Kraslow, Imhof, Norse), and the latest for New Jersey from Union, February 12, 1937 (Kelly).

Oven-bird*Seiurus aurocapillus* (Linnaeus)

The Oven-bird is one of our most widely distributed summer residents, breeding commonly over the larger part of the region wherever there are woods. It has been extirpated as a summer resident from the crowded city parks, but it still nests fairly commonly all around the outskirts of the metropolis. During migrations it is very common wherever there are patches of trees or bushes except along the outer strip of Long Island where it is decidedly rare.

The Oven-bird has been recorded in Bronx Park on the remarkable date of April 15, 1920 (Kuerzi), and at Orient, Long Island, as early as April 20, 1919 (Latham). The bird rarely arrives, however, before the last few days of April and usually not until the initial week in May. The peak of abundance comes during the middle of this latter month, and at this time our woods resound with the loud emphatic songs. Though very common, the Oven-bird is a difficult species to find and counts of numbers present are well-nigh impossible. In the woodlands of Westchester County I have often heard over three dozen individuals during a vigorous day of birding. By the end of May transients are scarce, and only stragglers are passing through up to the second week in June. The bird nests on the ground. There are one or two broods, local egg dates concentrated in late May and early June, with extremes May 14 and July 4. After the breeding season the Oven-bird becomes very quiet and secretive and is seldom seen. From the last week in July to the end of August there is a light but definite migration which becomes slightly more pronounced during September. This fall flight is so light, however, that one often wonders what happened to the large waves that passed through in the spring. After September the Oven-bird is indeed rare, yet I find the following extraordinary records: Montclair, New Jersey, No-

vember 20-21, 1924 (Mrs. Hegeman); Prospect Park, Brooklyn, November 23, 1913 (Victor); South Mountain Reservation, New Jersey, November 24, 1938 (Rosenblum); Inwood Park, New York City, December 17-21, 1935 (Karsch and Norse).

Northern Water-Thrush

Seiurus noveboracensis noveboracensis (Gmelin)

This large warbler, though very partial to the edges of woodland swamps, bogs, brooks and ponds, occurs as a common transient visitant in almost every conceivable type of habitat from the heart of the climax woodlands in the mountains of New Jersey to the edges of fountains in city parks and the mud flats on the outer strip of Long Island. As a summer resident it is confined to suitable swamps in the highest sections of New Jersey. It breeds fairly commonly but very locally near Sparta and High Point, in Bear and Big Pine Swamps, on the Waywayanda Plateau, and sparsely on the summit of Bearfort Mountain.

The Northern Water-Thrush has arrived at Cold Spring Harbor, Long Island, April 14, 1940 (Breslau, Darrow and Sedwitz), and in Prospect Park, Brooklyn, April 15, 1910 (Victor), but these dates are very early as the species seldom arrives before the closing days of April, and a spring peak is never reached until the middle of May. At this season during exceptional waves I have seen and heard twenty-seven individuals in a day in Westchester County. After May 25 transients become scarce, and very few stragglers linger until the second week in June. The bird nests on the ground or in upturned roots. Locally there is apparently but one brood, egg dates ranging from May 28 to June 19. Fall migration commences very early. One bird was banded at Elmhurst, Long Island, July 20, 1936 (Mrs. Beals), and there is a light sprinkling of dates for the remainder of this month and early August. The large majority of birds passes through between

mid-August and mid-September, and one month later migration is concluded. Stragglers have lingered in Bronx County as late as October 30, 1932 (Cruickshank), and in Prospect Park, Brooklyn, as late as November 30, 1908 (Victor).

Grinnell's Water-Thrush

Seiurus noveboracensis notabilis Ridgway

This large western subspecies is purely fortuitous on the Atlantic coast. A specimen was collected at Miller Place, Long Island (Helme), and another at Raritan, New Jersey, on May 30, 1889 (Southwick).

Louisiana Water-Thrush

Seiurus motacilla (Vieillot)

The Louisiana Water-Thrush is partial to wooded hill-sides where crystal brooks rush wildly to a lower level, or to moist lowland forests where small streams meander through luxuriant undergrowth. The bird breeds fairly commonly over the larger part of New Jersey, Rockland County and Westchester County but is uncommon to unknown as a summer resident in the coastal plain and near the densely settled suburbs and no longer nests in the immediate vicinity of the metropolis. On Long Island a very few pairs are thinly sprinkled along the north shore, casually as far east as Greenport. Over the larger part of the region the bird is a fairly common transient visitant. As with most warblers, however, it is least common in Nassau and Suffolk Counties especially along the south shores and is purely casual on the outer strip.

The Louisiana Water-Thrush is one of the first of our warblers to appear in the spring. One bird arrived in Newark, New Jersey, on the remarkable date of March 28, 1936 (Wol-farth), and another in Central Park on April 2, 1916 (Hix). The bird seldom arrives, however, before the end of the third week in April, and the peak of the spring flight comes during the first ten days in May. At this season I have heard as many

as twenty-three individuals in a day of vigorous birding in Westchester County, but in most localities three to six are the maximum one may ordinarily expect. After May 20 transients become scarce, and very few stragglers linger through the first week in June. The bird usually places its nest under a bank or in the roots of an upturned tree. Locally there is apparently but one brood, local egg dates ranging from May 1 to June 24. After the breeding season the birds are very silent and exceedingly difficult to find. The fall migration, though very light, is usually rather extended. A few are on the move as early as mid-July, the movement becomes pronounced in August, and the birds are regularly passing through to the middle of September. I find a record for Union County, New Jersey, October 12, 1925 (Urner), and a remarkable record of one eating a small fish in Central Park, November 24, 1910 (Hix).

Kentucky Warbler

Oporornis formosus (Wilson)

The Kentucky Warbler is essentially a bird of the dense undergrowth in moist rich woodlands, being especially partial to ravines through which water flows. With us it is a very rare local summer resident, a very rare spring transient and an even rarer fall transient. In New Jersey a pair or two breed along the Palisades, and it is possible that another pair breeds in the South Mountain Reservation in Essex County where a singing male has frequently been heard in summer. Elsewhere in the eastern third of our portion of that state the bird is a rare transient, but west of a line stretching from Paterson to Somerville it is purely casual at any time. About six pairs still nest in Westchester County, the farthest south station in recent years at Grassy Sprain. By far the most likely place in the entire New York City region to find this species is along the ridges between Elmsford, Irvington and Tarrytown. I can find no nesting records for Rockland

County, but it seems likely that the species has bred there as birds have been heard singing in summer near the Hudson River. For Long Island Griscom mentioned two old breeding records and Latham suspected a pair of breeding birds near Greenport from 1920 to 1924. Everywhere in our portion of New York State the Kentucky Warbler is one of the rarest of transients, especially along the south shore of Long Island where its occurrence is purely fortuitous.

The bird has been found near Ossining, Westchester County, as early as May 2 (A. K. Fisher), and at Orient, Long Island, as early as May 4, 1921 (Latham). Both of these dates are abnormal as the species is seldom recorded before May 18 and the majority of local records fall between this date and the end of the month. One individual was found in Central Park as late as June 13, 1892 (Chapman). The bird breeds on or near the ground. Locally there seems to be but one brood, the few egg dates before me ranging from May 31 to June 12. Suggestions that the species is overlooked during the breeding season are ridiculous as the bird is a loud and persistent singer on its nesting territory. A fall migration period is practically non-existent, the records being lightly sprinkled from mid-August to the first week in September. The two latest records are: Orient, Long Island, September 14, 1913 (Latham), and Union County, New Jersey, September 21, 1919 (Urner).

Connecticut Warbler

. *Oporornis agilis* (Wilson)

The Connecticut Warbler is fond of boggy thickets, dense undergrowth at the edges of swampy woods and the brushy margins of moist meadows. In our region it is a very rare or casual spring and an uncommon to rare fall transient.

Since the normal spring migration route of this species is up the Mississippi Valley it is extremely rare in the East at this season. Years of intensive birding have, however, pro-

duced nineteen local spring records, and I can see no point in listing them. They are concentrated in mid-May, with the earliest from Makania Swamp, New Jersey, May 6, 1939 (Hunn), and the latest from Astoria, Long Island, May 29, 1941 (Hines). A male was collected at Fort Lee, New Jersey, May 25, 1917 (J. Weber). In the fall the bird is much more regular. Though recorded in Alley Pond, Long Island, as early as August 17, 1937 (Sabin), and in Bronx County, August 20, 1922 (Watson), it seldom arrives before early September, and more than eighty per cent of all fall records are in this month. It must be emphasized that the discovery of a Connecticut Warbler anywhere in our region, even in September, is a piece of good fortune and I have gone for five years at a time without seeing the species locally. The bird irregularly lingers into October. The latest records are: Prospect Park, Brooklyn, October 31, 1937 (Breslau); Idlewild, Long Island, October 31, 1935, and November 6, 1937 (Mayer); East Hampton, Long Island, November 26, 1938 (Helmuth).

Mourning Warbler

Oporornis philadelphia (Wilson)

In the New York City region the Mourning Warbler occurs most regularly in swampy thickets, though it seems to be almost as partial to slashed areas where brush piles, briars and vines form an impenetrable jungle. In most localities where these habitats are to be found the bird is a rare late spring and a very rare fall transient. It is especially rare on the eastern two-thirds of Long Island and is seldom recorded along the south shores of Nassau and Suffolk Counties.

The species has been recorded at Bernardsville, New Jersey, as early as May 5, 1930 (Kuser), and at Hempstead, Long Island, on May 8, 1936 (Mahnkin), but the bird seldom arrives before the middle of May and is usually recorded only during the last ten days of this month. At this season if one

is willing to explore conscientiously the best habitats one will usually find the species. During extraordinary flights I have seen five in a day in the Van Cortlandt Park swamp. One straggler remained in Elizabeth, New Jersey, as late as June 10, 1935 (Urner). In the fall the Mourning Warbler is even a rarer find due no doubt to the dense vegetation at this season. Individuals have arrived in the Bronx region as early as August 5, 1926 (Kuerzi), and in Central Park as early as August 6, 1908 (Crolius and Griscom), but the bird is purely casual before the middle of August, and most of the south-bound birds pass through during the last two weeks of this month and the first ten days of September. By the last week in September migration is virtually concluded, yet I find records of stragglers in Union County, New Jersey, October 7, 1923 (Urner), Bronx Park, October 7, 1935 (W. Weber), Rye, Westchester County, October 12, 1933 (Cruickshank).

Northern Yellow-throat

Geothlypis trichas brachidactyla (Swainson)

The Northern Yellow-throat, though partial to swamp lands, wet meadows and the brushy edges of ponds and streams, occurs commonly even in dry places wherever there are dense tangles of grasses, briers and bushes. It is a common summer resident throughout the region, even nesting along the outer strip of Long Island. Naturally it gradually decreases as a breeding bird in and around the ever-growing metropolitan area, yet during migrations it is common to abundant even here.

The species has been recorded on Staten Island, April 10, 1922 (Davis), at Long Beach, Long Island, April 14, 1921 (Bicknell), and there are now many records for the remainder of this month. The bird ordinarily arrives in a widespread wave during the opening days of May, however, and the spring peak is not reached until the middle of this month.

At this season the Yellow-throats flood our lowlands, are especially noticeable because of their loud emphatic calls, and I have often recorded over one hundred in a day of vigorous birding. After May 25 most of the transients have departed, yet stragglers are passing through up to the middle of June. The bird nests on or near the ground. There are two broods, local egg dates concentrated in the last ten days of May, with extremes May 14 and July 9. Immediately after the breeding season fall migration sets in, birds regularly appearing in July in small city parks where the species does not nest. This southward movement is surprisingly protracted, the July trickle gradually increasing to a steady flow of migrants between August 20 and October 15. After October the bird is decidedly scarce, yet individuals regularly linger into December. These early winter records are mostly from marsh lands near the coast and are now too numerous to list. There are only seven records after December, the latest: Orient, Long Island, January 28, 1919 (Latham); Croton Point, Westchester County, January 11 and February 2, 1931 (Kuerzi, Peterson, Vogt); Hempstead Reservoir, Long Island, one bird throughout the winter of 1936-37 (Rorden).

Yellow-breasted Chat

Icteria virens virens (Linnaeus)

This amusing noisy acrobat of the bird world is very partial to fields of bushy undergrowth and impenetrable tangles of briars and is seldom seen away from such haunts. Though large and showy, it usually keeps well under cover and is much more often heard than seen. It is a fairly common summer resident over the larger part of New Jersey, Rockland County and Westchester County but decreases abruptly around all densely settled suburban areas and is now virtually extirpated as a breeder from the outskirts of the metropolis. On Long Island it is a fairly common local summer resident along the south shore from Queens County to Patchogue, an

uncommon local summer resident along the north shore from Great Neck to Huntington and with the exception of Gardiner's Island has evidently disappeared as a nesting species farther east. Wherever the bird does not nest it is an astonishingly uncommon to rare transient visitant in spring and an even rarer transient visitant in fall.

The Yellow-breasted Chat has arrived in the Bronx region as early as April 28 ("Handbook of Birds of Eastern North America"), in Montclair, New Jersey, as early as April 30, 1922 (Howland), and there are now several records for early in May. The bird seldom arrives, however, before May 10 and never arrives in numbers before the middle of the month. Stragglers are passing through up to the first week in June. During a day of vigorous birding in the best Chat country in Westchester County I have heard seventeen individuals mewling, tooting and whistling, but away from the breeding grounds one is fortunate to find a single representative even during the peak of migration. The bird usually places its nest in low bushes or vines. There is but one brood, local egg dates concentrated in early June, with extremes May 19 and July 6. After the breeding season the Chats seem to vanish, and migrants are infrequently recorded. Southbound birds begin to pass through during the first week in August, and by the middle of September the species is a decided rarity. I find a record for Mastic, Long Island, October 31, 1920 (L. Williams), and a record of a fresh specimen picked up at Jones Beach, Long Island, November 13, 1938 (J. Elliott). In November, 1932, a Yellow-breasted Chat came to a feeding station at Forest Hills, Long Island, and ate suet and bread crumbs. It remained throughout the winter (at least to March 9, 1933) and was seen on numerous occasions by a score of observers. One bird was seen at Long Branch, New Jersey, December 15, 1939 (Seeley).

Hooded Warbler

Wilsonia citrina (Boddaert)

The Hooded Warbler though partial to rhododendron swamps, laurel thickets and the low undergrowth of moist woodlands even nests commonly in parts of the pine barrens of New Jersey just to the south of us. In our portion of New Jersey it is a very common summer resident in the highlands of Warren, Sussex, Passaic, Morris and Bergen Counties, breeds fairly commonly south along the Palisades to Englewood and in the rich woodlands to the west, and in recent years has shown indications of increasing southward into Essex County. In our portion of New York State it breeds commonly in Rockland County and northern Westchester County, decreases south of White Plains and is now extirpated as a summer resident from Bronx County. A pair was suspected of nesting in Bayside, Long Island, in 1937. Why a species that nests in sections of the pine barrens of New Jersey does not nest in the pine barrens of Long Island is not understood. Wherever the bird does not nest it is an astonishingly rare transient visitant and is ordinarily recorded only on the days of our biggest waves. It is rarest in Nassau and Suffolk Counties and is purely fortuitous along the south shore of Long Island east of Valley Stream.

In 1929 the Hooded Warbler arrived at Boonton, New Jersey (Urner), and in Westchester County (Bronx County Bird Club) as early as April 28. This date is very exceptional, however, as the species seldom arrives before May 5 and is never common on its breeding grounds until the middle of the month. Stragglers are passing through up to the first week in June. In the best Hooded Warbler country in northern New Jersey I have recorded twenty-three individuals in a day. The bird places its nest in a low bush or sapling less than six feet from the ground. There are one or two broods, local egg dates concentrated in early June, with extremes May 18

and July 4. After the breeding season the species becomes very rare. Southbound individuals begin to appear in late July, once in Inwood Park, New York City, as early as July 19, 1937 (Norse). Most of the birds depart in August, a few stragglers linger to the end of September, and one individual was recorded at Englewood, New Jersey, on the remarkable date of November 8, 1903 (Rogers).

Wilson's Warbler

Wilsonia pusilla pusilla (Wilson)

The Wilson's Warbler is particularly fond of the low growth in swampy woodlands and the bushy tangles of alders and willows along ponds and streams. It is an uncommon to fairly common transient visitant over the larger part of the New York City region except in Nassau and Suffolk Counties where it is decidedly uncommon and along the outer strip of Long Island where it is rare.

The bird has arrived in Central Park as early as April 30, 1920 (E. Eliot), and in several localities during the initial week in May, but it is very rarely recorded before May 10 and seldom reaches a spring peak until the waves of female warblers arrive late in this month. Even at this season one considers oneself fortunate to find a half dozen Wilson's Warblers in a day, but during marked waves in the rich lowlands of Westchester County I have recorded forty-three in a vigorous day of birding. After the end of May the bird becomes scarce, and very few stragglers linger to the middle of June. Records for Inwood Park, New York City, July 26, 1936 (Norse), and Bayside, Long Island, July 31, 1934 (Bohn), are remarkably early, as southbound birds ordinarily do not arrive until the middle of August and there are no widespread waves until the end of this month. The fall movement is always much lighter than in spring and reaches its peak during the first ten days of September. By October the bird is purely fortuitous, yet I find records for Central Park,

October 31, 1903 (Rogers), Bronx County, November 22, 1885 (Bicknell), Prospect Park, Brooklyn, November 25, 1914 (Victor).

Canada Warbler

Wilsonia canadensis (Linnaeus)

The Canada Warbler is very partial to the low undergrowth of wet rich woodlands. Over the larger part of our region it is known as a common transient visitant and, though least common along the south shores of Nassau and Suffolk Counties, occurs there regularly. In New Jersey the bird breeds fairly commonly in suitable habitat in the highlands of Warren, Morris, Sussex and Passaic Counties south to the Delaware Water Gap, and Budd's Lake. In our portion of New York State it nests locally in the highlands of Rockland County and, though only two pairs have been found breeding in northern Westchester County, it is conceivable that further investigation may reveal more nesting sites there as the bird breeds regularly just to the north in Putnam County.

The Canada Warbler has arrived in Westchester County as early as May 2, 1925 (Coles), but the species is not to be expected before May 9, and the peak of the spring flight never comes until the middle of this month. At this season I have recorded over forty Canada Warblers during a vigorous day of birding in Westchester County. By May 26 most of the migrants have departed, yet a few stragglers regularly linger into June, very casually as late as the third week of the month. The bird nests on or near the ground. Locally there seems to be but one brood, the few egg dates before me ranging from May 29 to June 16. Vagrants irregularly show up in summer in places where the species does not breed. The fall migration regularly starts during the second week in August, and the bulk of birds passes through late in this month. After September the Canada Warbler is a very rare bird, yet individuals have lingered at Bayville, Long Island, as late

as October 28, 1938 (Cruickshank), in Bronx County as late as October 29, 1901 (Hix), and at Inwood, New York City, as late as November 13, 1935 (L. N. Nichols).

American Redstart

Setophaga ruticilla (Linnaeus)

The Redstart is essentially a bird of the woodlands showing a marked preference for second growth deciduous areas. It is a common summer resident over the larger part of the New York City region, becoming uncommon as a nesting species in the vicinity of all heavily settled areas and abruptly rare around the outskirts of the metropolis. Moreover it is locally uncommon in summer in the mountains of northwestern New Jersey and uncommon or even absent along, and south of, the southern limits of our portion of that state. It still nests sparsely in the northern portion of Staten Island. On Long Island the bird is a fairly common local summer resident in the few remaining woodlands of Queens County, along the north shores of Nassau and Suffolk Counties to Greenport and Gardiner's Island, and an uncommon local summer resident along the south shore from Mastic to Montauk. During migrations it is common to abundant everywhere, even occurring regularly along the outer strip of Long Island.

The Redstart has been recorded in Bronx County as early as April 24, 1923 (Kessler), and in Englewood, New Jersey, as early as April 26, 1914 (Griscom). The bird ordinarily, however, does not arrive until the first pronounced wave during the initial week in May, and maximum abundance is seldom reached before the middle of this month. At this time I have recorded over one hundred Redstarts during a vigorous day of birding in Westchester County. By the fourth week in May migration is virtually over, yet stragglers are passing through up to the middle of June. The bird usually

places its nest from ten to thirty feet from the ground. There are one or two broods, local egg dates concentrated in late May and early June, with extremes May 18 and July 6. Vagrants show up from time to time during the summer in localities where the species does not breed. During the last week in July a few southbound birds make their appearance, and two weeks later migration is well under way. The peak of the autumn flight comes during the first half of September. By mid-October the Redstart is a very rare bird, yet individuals occasionally linger to the end of this month, and I find records for Westchester County, November 16, 1923 (Coles), Prospect Park, Brooklyn, November 22, 1908, and November 23, 1919 (Victor), Inwood Park, New York City, December 10 to 27, 1931 (Meyers and Cruickshank).

PLOCEIDAE: WEAVER FINCHES

English Sparrow

Passer domesticus domesticus (Linnaeus)

Eight pairs of these European weaver finches were liberated in Brooklyn in 1850 but did not thrive. In 1852 a larger number was brought over and kept in confinement throughout the winter. Those that survived were liberated the following spring in Greenwood Cemetery, Brooklyn. These birds thrived all too well, quickly multiplied and spread rapidly. The species was first recorded in Chatham, New Jersey, in 1868 and in Caldwell, New Jersey, in 1870. The bird soon became a pest in grain fields and began chasing our native species out of the suburbs and away from farm yards. Early in this century thousands could be seen in New York City in a day. Since automobiles have displaced horses there has been a definite decrease, yet the species is still a common permanent resident over the larger part of our region.

The English Sparrow is essentially a bird of disturbance communities, nesting commonly in the cracks of man-made structures, in cavities in trees, in bird houses and less frequently in a large bulky grass and feather nest high in a tree. There are three or more broods, local egg dates ranging from March 23 to August 18.

ICTERIDAE:

MEADOWLARKS, BLACKBIRDS AND ORIOLES

Bobolink

Dolichonyx oryzivorus (Linnaeus)

This inimitable songster is a bird of extensive grassy fields, meadows, fallows and, in a few localities, even the dry edges of the brackish coastal marshes. Until the middle of the nineteenth century it was a common summer resident throughout the New York City region, but the business of trapping males for cage birds coupled with the merciless Rice-bird shooting and the subsequent market hunting was all too much for a species with only one brood, and by 1920 it was found as a breeder only in small numbers in the more rural districts. In recent years there has been a slight increase, yet the breeding distribution is very unstable, a small colony often nesting in a field one year and disappearing the next. At present the bird breeds fairly commonly over most of the country districts of New Jersey, decreasing eastward towards the ever-expanding suburbs and is rare or unknown as a summer resident in most sections near the Hudson River. With the ditching and diking of the Newark marshes the nesting population rapidly increased there, and in 1935 Urner counted as many as ninety-three pairs in that area during June. Due to the rapid spreading of *Phragmites* the bird is now disappearing there (Eynon). The bird breeds fairly commonly in the larger meadows of Rockland and northern

Westchester Counties, decreases rapidly southward and is rare or unknown as a summer resident near the metropolis. Three or more pairs have nested on Staten Island in recent years. On Long Island the bird now breeds thinly and very locally in eastern Nassau and Suffolk Counties. In the last decade a definite increase has taken place at the eastern end of the Hempstead Plains and along the south shore between Freeport and Quogue, and a marked decrease on the Orient peninsula. The bird is an uncommon spring and an abundant fall transient throughout the region except in such places as Central Park where it is astonishingly rare even at the peak of the fall flight.

There are two remarkably early records for the Bobolink: Bronx County, April 19, 1909 (L. N. Nichols); Westchester County, April 28, 1925 (Coles). The bird is, however, purely fortuitous in April and is seldom recorded before May 10. The spring flights are ordinarily light, daily counts of over twenty being unusual. By the last week in May migration is virtually over, very few stragglers passing through as late as June 10. The bird nests on the ground. There is but one brood, local egg dates concentrated in early June, with extremes May 26 and June 29. Southbound migration starts early, small flocks regularly arriving during the opening week in July. By the first week in August this movement is at its peak, and at this season one will often see hundreds and occasionally thousands in a day. Throughout August the mellow *chink* of the Bobolink is one of the most common sounds coming from the sky at night. With the first light frost in September the birds quickly disappear, and only stragglers are left by the end of this month. The two latest records are: Bronx County, October 30, 1930 (Kuerzi), and Flushing, Long Island, November 2, 1915 (Harper).

Eastern Meadowlark*Sturnella magna magna* (Linnaeus)

The Meadowlark is essentially a bird of extensive grassy fields, meadows and the edges of marshes, and wherever such blocks of habitat are found it may be expected as a fairly common summer resident. Along the coast where the species frequents the salt meadows it is a common permanent resident, becoming noticeably more common during migrations and less common in winter. Away from the coast, though a few individuals may be recorded every month in winter in a few open spring-fed marshes, the species is essentially a summer resident. In extremely severe winters many Meadowlarks, even on our coastal meadows, perish, and during such seasons revolutionary individuals wintering inland are wiped out. Strangely enough the bird is very rare at any time in such places as Central and Prospect Parks and is seldom recorded even during migrations.

Along the coast wintering flocks of Meadowlarks occasionally shift from locality to locality, and such movements are often erroneously taken to indicate the beginning of large scale migration. As a matter of fact even in mild and advanced seasons the first definite wave seldom comes before the last week in February, and it is ordinarily March 10 before any widespread movement sets in. The peak of the spring flight comes early in April, and only stragglers are passing through as late as the middle of May. The bird nests on the ground. There are generally two broods, local egg dates concentrated in the last half of May, with extremes May 3 and July 22. Immediately after the breeding season Meadowlarks gather in small groups and wander about the countryside. With the coming of the first light frost in September migration becomes marked and builds up to maximum abundance by mid-October. At this season one will frequently see groups of twenty to forty individuals and

occasionally along the coast flocks of over one hundred. After October most of the Meadowlarks leave inland localities, and the few wintering groups concentrate along the vast brackish marshes.

Western Meadowlark

Sturnella neglecta Audubon

I find a report of a Western Meadowlark seen and heard at South Plainfield, New Jersey, April 28, 1940 (*The Auk*, 1941, Vol. 58, p. 265). Though the identification is probably well authenticated, it seems advisable to keep this species on our hypothetical list until its occurrence in our region is more thoroughly substantiated.

Yellow-headed Blackbird

Xanthocephalus xanthocephalus (Bonaparte)

This beautiful bird is an accidental visitant from the west. A specimen in the collection of the late John Hicks was said to have been collected on Long Island (J. Mathews). In addition I find the following sight identifications: Jones Beach, September 1, 1932 (Lunt); Flushing, March 29 to May 7, 1932 (Walker, Berliner, Watson *et al.*); New Hyde Park, August 5, 1934 (Sedwitz and Cruickshank); Orient, October 4, 1940 (Latham).

Eastern Red-wing

Agelaius phoeniceus phoeniceus (Linnaeus)

The Red-wing is essentially a bird of swamps, marshes, flooded meadows, the margins of ponds and streams and is particularly fond of the wettest areas where cat-tails, pickerel weeds and arrowheads cover the ooze below. Wherever these habitats occur it is a common or even locally abundant summer resident, but naturally the breeding birds progressively disappear from an area as the marsh lands are drained and destroyed. Over the larger part of the region the species is

common to abundant during migrations, yet surprisingly few drop in to such places as Central and Prospect Parks.

In very advanced seasons small flocks of male Red-wings will arrive as early as the second week in February, but it is ordinarily a month later before the first widespread movement sets in and late March before a spring peak is reached. At this season one will often see flocks consisting of hundreds and occasionally thousands of individuals. After the middle of April migration terminates abruptly, yet a few stragglers are passing through up to the opening days in June. The bird usually nests in low vegetation over wet areas, occasionally as high as thirty feet in a tree along the water's edge, rarely on the ground or in a low bush in a dry field. There are one or two broods, local egg dates concentrated in the last half of May, with extremes May 7 and July 4. Early in July Red-wings begin to gather in large flocks and roam about the country, and migration probably commences at this time as birds regularly show up in areas where the species does not breed. As July progresses flocks swell, and by August large concentrations may be encountered, especially around the larger marshes and near roosts. Migrants keep pouring in from the north, and with the first heavy frost in October the peak of abundance for the entire year is reached. At this season large flocks are seen passing over all localities, and one may see many thousands pouring into a roost in an evening. By November numbers decline rapidly, and the species becomes rare or unknown in most inland localities. On the coastal plain, however, flocks regularly linger to the end of December. During January and February the Red-wing is purely fortuitous in most localities, the few wintering flocks being confined to the coast or to the larger spring-fed marshes on the coastal plain.

Orchard Oriole

Icterus spurius (Linnaeus)

The Orchard Oriole is very partial to orchards, nurseries, the shade trees of large gardens and estates, and saplings in open country bordering ponds and streams. Over a large part of the New York City region it is known only as an uncommon to rare spring and a very rare to casual fall transient. Its distribution as a breeding bird is complex and puzzling. In New Jersey the species breeds commonly in the lowlands of Sussex, Warren, Hunterdon, Somerset and Morris Counties, decreases eastward and is very rare and local as a summer resident within twenty miles of the Hudson River. In our portion of New York State a few pairs nest in the lowlands of Rockland County, not more than ten to twenty pairs are sprinkled over Westchester County and only two or three pairs still nest on Staten Island. On Long Island it is a very local summer resident along the north shore from Flushing to Orient and Gardiner's Island, an even more local and irregular summer resident along the south shore from Queens County to Babylon and an extremely rare summer resident elsewhere.

The Orchard Oriole has been recorded in Bronx County as early as April 28, 1929 (Kuerzi), but it is ordinarily the middle of the first week in May before the species appears. Away from breeding stations the bird is astonishingly rare and one may well observe within the City limits for a year without seeing a migrant. Stragglers have been recorded as late as June 8. In the lowlands of inland New Jersey one may see as many as fifteen pairs of Orchard Orioles in a day of vigorous birding, but elsewhere in our region even a count of three pairs is exceptional. The nest is usually placed in a small tree from ten to thirty feet from the ground. There is but one brood, local egg dates concentrated in late May and early June, with extremes May 24 and June 23. Immediately

after the nesting season most of our Orchard Orioles vanish, and records after the end of July are few. The two latest records before me are: Shelter Island, September 11, 1938 (Latham); Massapequa, Long Island, September 27, 1937 (J. Elliott).

Baltimore Oriole

Icterus galbula (Linnaeus)

The Baltimore Oriole is a bird of the open country, showing a marked preference for tall elms, sycamores and fruit trees around villages, gardens, parks, farms and along highways. With the exception of the heavily populated areas in the immediate vicinity of the metropolis where breeding pairs are few and steadily decreasing, it is a common summer resident wherever the forementioned type of habitat occurs. It is less regularly found nesting along the edges of woods and in the tall trees bordering waterways or sprinkled in fields and pastures. As a transient it occurs very commonly throughout the region wherever there is a scattering of trees and tall bushes.

A Baltimore Oriole thought to be a migrant was recorded on Long Island as early as April 14, 1938. There are several other mid-April dates, but such occurrences undoubtedly represent individuals that wintered nearby. In very advanced seasons light flights occur as early as April 28, but it is ordinarily the first week in May before any widespread movement sets in and mid-May before a spring peak is reached. At this season I have recorded over fifty in a day of vigorous birding in Westchester County. By May 25 most of the transients have departed, a few stragglers occasionally passing through up to the second week in June. The bird generally places its nest in a deciduous tree from ten to sixty feet from the ground. There is but one brood, local egg dates concentrated in late May, with extremes May 16 and July 7. Immediately after the breeding season the Orioles become quiet and are gener-

ally overlooked. The first sign of a southward flight comes during the second week in August. With the coming of the initial cool weather in early September there is a sudden rush of migrants, and within two weeks most of the Orioles have moved south of us. Stragglers irregularly linger into October, very rarely into November, yet I find seven records for December, four for January, and three for February. Moreover there are two cases where a bird successfully passed the entire winter: Central Park, 1909-10, and Huntington, Long Island, 1935-36. Most of the winter dates are from coastal regions, the majority within New York City or on Long Island.

Rusty Blackbird

Euphagus carolinus (Müller)

The Rusty Blackbird is particularly fond of flooded woods, swampy thickets, the bushy borders of ponds and streams and is only infrequently found away from the immediate vicinity of fresh water. It is uncommon to locally common transient visitant throughout the New York City region, being least regular along the southern rim of Nassau and Suffolk Counties.

The species has arrived in Brooklyn, Long Island, as early as September 1, 1914 (Victor), but it is ordinarily the first week in October before the first widespread movement sets in and late in the month before maximum abundance is reached. At this season one will often find flocks of twenty or thirty individuals and very infrequently concentrations of several hundred. After the first killing frost in November numbers gradually fall off, yet migrants are passing through to the end of the year. Although decidedly uncommon in January and early February, the species occurs in small numbers at this season every year in our larger spring-fed swampy thickets. In very mild seasons the return flight may commence by the middle of February, but March 10 is a much more

normal arrival date, and it is ordinarily late March or early April before the peak of the spring flight is reached. This species never occurs in large concentrations like other black-birds and even a count of two hundred is exceptional. By the first week in May most of the birds have passed to the north, but individuals irregularly stay until mid-May and one has lingered on Long Island as late as June 3 (*vide* Griscom).

Purple Grackle

Stone's Grackle

Quiscalus quiscula stonei Chapman

Ridgway's Grackle

Quiscalus quiscula ridgwayi Oberholser

No serious student should fail to read Doctor Chapman's careful analysis of the grackle distribution in the United States (*The Auk*, 1935, Vol. 52, pp. 21-29; 1936, Vol. 53, pp. 405-417; 1940, Vol. 57, pp. 225-233). Unfortunately limitations of space prevent me from going into this interesting problem in detail. Briefly, until this comprehensive study was made the breeding grackles of the New York City region had been described as the Purple Grackle, plus a puzzling assortment of intermediates. Doctor Chapman points out that there are four distinct grackles in the east, for which he suggests the following names: (1) Florida Grackle (*Quiscalus quiscula quiscula*), (2) Stone's Grackle (*Quiscalus quiscula stonei*), (3) Ridgway's Grackle (*Quiscalus quiscula ridgwayi*) and (4) Bronzed Grackle (*Quiscalus quiscula aeneus*). The large majority of breeding grackles collected in the New York City region have proved to be either *stonei*, *ridgwayi* or intermediates between the two. On Long Island the breeding grackles are predominantly *ridgwayi*, most colonies at the western end showing strains of or including pairs of *stonei*,

those at the eastern end including very few *stonei* but a large number of birds closely approaching *aeneus*. In the highlands of Rockland County, Westchester County and northwestern New Jersey the birds are chiefly *ridgwayi*, with many of the colonies showing strong signs of *aeneus* relationship. As one works southward the *aeneus* strain tends to disappear, the proportion of *stonei* increases until finally in central New Jersey the birds are predominantly *stonei*, and one even finds intermediates between *stonei* and *quiscula*. This problem, of course, still requires considerable study, and I urge every local observer to read Doctor Chapman's article in *The Auk*, become thoroughly acquainted with the identification marks of each type and help us to get a more detailed local picture.

The grackle is essentially a bird of disturbance communities, showing a decided preference for areas having extensive lawns bordered by groups of tall conifers and is therefore particularly common around parks, cemeteries, suburban estates and small towns. It is very adaptable, however, and nests locally in swampy woods and occasionally even in bushy thickets. Over the larger part of the New York City region it is a common to very common local summer resident.

With the first heavy thaw in late winter the grackles commence returning from the south. In mild seasons the initial flight may come early in February, but it is ordinarily the end of this month before any widespread movement sets in. The first birds to arrive generally prove to be birds that breed locally. During the peak of migration in March one will often see large flocks consisting of thousands of individuals, and since most of the grackles breeding to the north of us are Bronzed Grackles, and since most local breeding colonies are established before this major movement, it is logical to assume that these tremendous migrating flocks are predominantly *aeneus*. With the coming of April transients rapidly decrease, yet stragglers have been recorded even to the third week in May. The bird ordinarily nests in small



colonies in tall coniferous trees. There is apparently but one brood, local egg dates concentrated in early May, with extremes April 25 and June 30. Immediately after the breeding season the birds gather in flocks and roam the countryside. With the first heavy frost in early October there is a large flight of grackles from the north, and for the following month flocks consisting of thousands may be encountered. Reports of fifty to sixty thousand in a roost near the mouth of the Raritan River in New Jersey give some indication of the numbers one may see. The only place in our region where one may be sure of finding grackles in winter is around the mouth of the Raritan River, and in mild seasons large numbers are often present there. Elsewhere in our region grackles are very scarce after the middle of November, yet a few regularly winter, the majority *aeneus*.

Bronzed Grackle

Quiscalus quiscula aeneus Ridgway

The Bronzed Grackle breeds commonly west of the Appalachian Mountains, over a large part of Canada, throughout northern New York State and New England south in the mountains to the Catskills and Connecticut. A few specimens have been collected in the New York City region during the breeding season, but these do not establish unquestionable nesting occurrences, as migrants are irregularly passing through even during the third week in May. After the detailed discussion of the preceding species it would be superfluous to repeat the details. In short, the Bronzed Grackle is essentially an abundant transient throughout our region and is the grackle most commonly found in winter. An analysis of all collected specimens and sight records by very experienced observers indicates the following migration periods: October 5 to November 25 (many winter records), February 20 to May 17.

Cowbird*Molothrus ater ater* (Boddaert)

The Cowbird is well known for its parasitic habits. It is an adaptable species, occurring in most types of habitat but showing a marked preference for open country and generally avoiding all but the margins of heavily wooded areas. Over the larger part of the New York City region it is a fairly common summer resident, a common to abundant transient and is rare but regular in winter. As a breeder it is naturally decreasing in New York City and in the heavily populated suburbs. As a transient it is astonishingly rare in such places as Central and Prospect Parks.

In advanced seasons flights of Cowbirds may come as early as the last week in February, but it is ordinarily March 10 and often March 20 before the first widespread movement sets in. By the end of this month or early April a spring peak is reached, and flocks of over one hundred are not unusual. After the first of May migration rapidly terminates, and only stragglers are passing through up to the end of this month. The eggs which are laid in the nests of other birds have been recorded locally from April 26 to July 4. After the breeding season the Cowbirds leave their respective territories, gather in small groups and are most frequently found in such places as pastures, around stables and even around refreshment stands in many of our crowded recreational areas. A few birds are on the move during August and early September. With the coming of the first light frost in September migration becomes pronounced, and by the end of October the peak of abundance for the entire year is reached. At this season one may see hundreds flying into a roost in an evening. By November 20 the main body of Cowbirds has moved to the south, and the species becomes rare inland. Near the coast, however, groups regularly linger until Christmas and occasionally spend the winter, the large majority within thirty miles of Perth Amboy, New Jersey.

THRAUPIDAE: TANAGERS

Western Tanager*Piranga ludoviciana* (Wilson)

An adult male of this species was seen at close range in a small patch of oak woods at Wainscott, Long Island, May 20, 1934 (W. T. Helmuth). It is inconceivable that an observer of such great experience could err on so vivid and distinct a bird. The species has been recorded from Maine, Massachusetts, Connecticut and New York, but this is our only local record.

Scarlet Tanager*Piranga erythromelas* Vieillot

The exquisite Scarlet Tanager is a bird of rich woodlands, showing a marked preference for areas where there is a preponderance of tall oaks and ordinarily avoiding areas that are chiefly coniferous. In the New York City region it is a common summer resident in most sections where luxuriant groves of trees are found, and though it becomes much less common in the vicinity of the heavily populated metropolitan area a few pairs still nest within the New York City limits. The bird also becomes noticeably scarce to unknown as a breeder even in ideal woodlands on the south shore of Long Island and along the New Jersey coast. As a transient it is common throughout the region wherever there are trees or tall bushes.

The Scarlet Tanager has been recorded at Morristown, New Jersey, as early as April 12, 1887 (*vide* Griscom), and in New York City as early as April 19, 1882 (*vide* Griscom), but such dates are purely casual. In fact, even late April records are few, and the species ordinarily does not arrive until May 3. Around the middle of May maximum abundance for the entire year is reached, and during big waves several dozen may be recorded in a day, and I have even found remarkable concentrations of fifteen males in a single large tree. After this peak numbers gradually fall off, and only stragglers are

passing through during the first week in June. The bird usually places its nest far out on a branch from six to forty feet from the ground. There are one or two broods, local egg dates concentrated in late May and early June, with extremes May 18 and July 20. With the coming of August a light movement of Scarlet Tanagers sets in, but it is not until early September that this southward migration becomes pronounced. The fall flight is never as heavy as the spring one and a count of four or five individuals on any one day is considered good. By mid-October most of the birds have departed for the south, but stragglers irregularly linger to the end of the month and I find a record for Demarest, New Jersey, November 7, 1937 (Bowdish), and another for Bronx County as late as November 21, 1927 (L. N. Nichols).

Summer Tanager

Piranga rubra rubra (Linnaeus)

Up to the middle of the nineteenth century when this species nested regularly in southern New Jersey it wandered casually into our area. By the beginning of the current century, however, its occurrence was purely fortuitous, and Griscom knew of but two twentieth century records. Since 1926 one or two individuals have appeared almost every year, and I can see no point in listing all occurrences in detail.

LONG ISLAND: Griscom mentioned thirteen records between April 6 and May 16, the last in 1902. I find fourteen records since 1926 representing all four counties. Twelve of these are spring dates, the earliest from Brooklyn, April 6, 1941 (Breslau), and the latest from Speonk, May 25, 1929 (Wilcox). There are but two fall dates: Bayside (Bohn) and Oyster Bay (Swope), both on September 7, 1935.

NEW YORK STATE: Bronx County, April 22 and 23, 1939 (Sialis Bird Club); June 12, 1927 (C. Johnston); Central Park, April 26, 1937 (Peterson); May 13, 1929 (Orth); September 10, 1930 (F. E. Watson); Ward's Island, September 19, 1929 (Cromwell).

NEW JERSEY: The species was recorded from Morristown without data by Thurber (1887). I find only two twentieth century records: Leonia, May 5, 1916 (J. Weber); Clifton, July 29, 1938 (Mangels).

FRINGILLIDAE: GROSBEAKS, FINCHES, SPARROWS
AND BUNTINGS**Eastern Cardinal***Richmondia cardinalis cardinalis* (Linnaeus)

The Cardinal, though occurring in all types of brushy country, is particularly fond of the cultivated grounds around habitations and the bushy margins of rich woodlands. Formerly a common permanent resident in the vicinity of New York City, even nesting regularly in Central Park and on western Long Island, it rapidly decreased during the closing years of the nineteenth century and by 1920 was virtually extirpated from all sections except in the southeastern corner of our portion of New Jersey. In recent years the species has been slowly but steadily re-establishing itself northward. In New Jersey it is now a fairly common permanent resident over most of Hunterdon, Somerset, Middlesex, Monmouth, Union and Essex Counties. It decreases northward and westward and is still accidental in the higher wooded hills of Warren, Sussex, Passaic and Morris Counties. In our portion of New York State the species now breeds regularly though sparsely in southern Rockland County, in southern Westchester County and on Staten Island. Elsewhere it is still very casual as a nesting species. Wherever the Cardinal breeds it is a permanent resident. Wherever it does not breed it may occur as a rare and erratic visitant, and though the majority of records for such places are concentrated in winter its time of appearance and its length of stay are absolutely unpredictable. Like all permanent residents which reach the northern limits of their range here the Cardinal is subject to severe winter killing.

The bird places its nest in a vine, bush or sapling from three to twenty feet from the ground. Locally there are one or two broods, egg dates concentrated in the last half of May, with extremes May 5 and July 11.

Rose-breasted Grosbeak*Hedymeles ludovicianus* (Linnaeus)

This beautiful bird is a dweller of low varied woodlands, being especially fond of rich undergrowth near clearings and dense thickets bordering lakes and streams. As a breeding bird its numbers are subject to remarkable variations from year to year. Though a common summer resident over the larger part of our portion of New Jersey, it decreases south-eastward in the state and becomes rare to unknown as a breeder in the extreme eastern sections of Monmouth County as well as in the more heavily settled metropolitan area. It is a common summer resident in Rockland and Westchester Counties, decreases south of White Plains and is now virtually extirpated as a breeder in Bronx County. Griscom called the bird a rare and irregular summer resident on the north shore of Long Island and stated that many years ago it bred regularly in country that is now Long Island City and Astoria. Only two or three pairs still nest in all of northern Queens and Nassau Counties, and I am unable to find a single positive nesting record for Suffolk County. It is true that singing males have been heard in several localities in June, and a pair or two may well have bred, but evidence based on singing males is far from conclusive. As a transient the species is common throughout the region except in Suffolk County and southern Nassau County where it is decidedly uncommon to rare even in spring.

The Rose-breasted Grosbeak has arrived at Northport, Long Island, as early as April 20, 1941 (McKeever), and there are several records from widely scattered localities for later in this month, but such occurrences are purely casual as the species ordinarily does not arrive until the first week in May. The peak of the spring flight comes during the middle of this latter month, and during large waves I have recorded as many as twenty-seven individuals in a day of vigorous birding in Westchester County. By the end of May most migrants

have departed, yet stragglers irregularly linger to the middle of June, and vagrants float from locality to locality throughout the summer. The bird places its nest in a shrub or sapling from four to sixteen feet from the ground. There is but one brood, local egg dates concentrated in late May, with extremes May 18 and June 28. During the fourth week in August there are often indications of a southward migration, but it is not until the beginning of September that any widespread movement sets in. By the end of this month most of the Rose-breasted Grosbeaks have gone to the south of us, and very few stragglers linger to the middle of October. I find three very unusual records: one in Essex County, New Jersey, December 4, 1932 (Mrs. Fry); one captured in Central Park, December 16, 1909 and kept in the Park Zoo; one at a feeding station in Rutherford, New Jersey, from January 26 to February 13, 1908 (C. Brown).

Eastern Blue Grosbeak

Guiraca caerulea caerulea (Linnaeus)

An accidental visitant from the south. Inexperienced observers frequently transmogrify Indigo Buntings into the rarer bird. I find six unquestionable records for our portion of New York State: specimens collected on Manhattan Island, May 15, 1838 (*vide* Griscom); Carnarsie, Brooklyn, May, 1843 (*vide* Griscom); Moriches Inlet, Long Island, September 20, 1934 (Wilcox); specimens carefully studied at Long Beach, Long Island, October 15, 1916 (J. Johnson and C. Rogers); Flatbush, Long Island, May 21, 1914 (Walsh); Montauk, Long Island, October 12, 1941 (Astle, Bohn *et al.*). Griscom, upon checking reports for our portion of New Jersey prior to 1923, found the evidence positively inconclusive. I find no unquestionable records and only three recent sight reports that deserve consideration: Montclair, May 11, 1935 (Mrs. Bailey), and May 15, 1932 (Mrs. Hegeman); Arlington about September, 1925 (O. Medsger).

Indigo Bunting*Passerina cyanea* (Linnaeus)

The Indigo Bunting is essentially a bird of the hill country showing a marked preference for low second growth around slashes, neglected farm lands, and the margins of open woodlands. In such country it is a common summer resident throughout the larger part of our region, but it is naturally becoming scarce to unknown as a breeder in and around New York City. On Long Island it is decidedly rare and irregular as a summer resident, the few pairs being sprinkled on Gardiner's Island and along the north shore from Miller Place west to Queens County and in the Half Hollow Hills south to Wyandanch. In the last two years the species has bred as far south as Manorville. In Nassau and Suffolk Counties the bird is even very uncommon as a transient. In the remainder of our region it is a common spring and an uncommon fall transient wherever there are trees and bushes.

The Indigo Bunting has been recorded in Central Park as early as April 18, 1935 (Rich), in East Hampton, Long Island, April 20, 1924 (Helmuth), and there are several other records from widely separated points for the last ten days in this month. Such occurrences are fortuitous, however, as the species ordinarily does not arrive until May 10, and maximum abundance is seldom reached until two weeks later. At this season I have recorded eighteen Indigo Buntings during a vigorous day of birding in Westchester County. By the end of the month migrants become very scarce, yet stragglers are passing through into the third week in June. The bird usually places its nest in a bush less than four feet from the ground, rarely in a sapling as high as twelve feet. There are one or two broods, local egg dates concentrated in early June, with extremes May 27 and July 12. After the breeding season most of our Indigo Buntings seem to vanish. With the coming of September there are signs of a fall movement, but the species

is astonishingly scarce at this season, the birds singularly showing a marked preference for bushy borders of swamps where they are seldom found in spring. After September the species is purely casual, the latest records before me being Central Park, October 19, 1922 (Crosby and Griscom), and Idlewild, Long Island, October 29, 1939 (Mayer).

Painted Bunting

Passerina ciris (Linnaeus)

In the days when traffic in native birds was heavy specimens of this beautiful southern finch were seen around New York City but it was suspected, and rightly so, that all of the birds were escapes. Bicknell described the occurrence of the species at Riverdale, New York City, on July 13, 1875, and on the authority of Akhurst records the capture of five or six specimens near the Narrows and two others in Brooklyn. Dutcher records a specimen taken at Bridgehampton, Long Island, in December, 1855. Griscom, writing in 1923, placed the bird on the hypothetical list since no record had been made after the traffic in wild birds had been stopped.

I find three very recent records: one in Central Park, September 9 to 23, 1927 (Miss Samek *et al.*); one in Flushing, Long Island, November 11, 1931 (Mrs. W. Carr); one in Bronx County, September 29, 1937 (E. Petersen). It is possible, though not probable, that these were escapes from some aviary but this could be said of most of our unusual finds, and it seems to me that the Painted Bunting has just as strong a claim to a place on our list of accidental visitants as several other species.

Dickcissel

Spiza americana (Gmelin)

The Dickcissel, a bird of grassy fields, meadows and pastures, was formerly a common summer resident in parts of our territory and elsewhere in the Middle Atlantic States. Its

disappearance westward by the end of the nineteenth century has never been explained. It bred commonly on Long Island until 1842, was very rare on Shelter Island by 1875 (Worthington), and stragglers were taken at Miller Place in 1888 (Helme) and at Blythewood, August 25, 1890 (F. Johnson). In New Jersey it bred commonly near Hoboken until 1851 (Galbraith), yet between 1868 and 1890 there were only four records for the state. In 1904 W. Miller found a pair breeding near Plainfield and, though young birds were successfully raised, they never returned.

In the last few years there has been an increasing number of records throughout the east, and it is possible that the Dickcissel will reappear in our region just as mysteriously as it left. One was seen in Central Park on October 4, 1922 (Griscom), and another from September 8 through 15, 1939 (Mrs. Dale, R. Peterson *et al.*). One was taken in a banding trap in Speonk, Long Island, October 16, 1929 (Wilcox). Two were seen at Water Mill, Long Island, October 22 and one October 25, 1938 (Helmuth). One was picked up dead in Scarsdale, Westchester County, October 14, 1941 (Dock).

Eastern Evening Grosbeak

Hesperiphona vespertina vespertina (W. Cooper)

This handsome species from the northwest has extended its winter range to the eastward and is now a rare and irregular winter visitant in the New York City region. Before the phenomenal invasion of 1890 it was virtually unknown in the east, but since that winter it has occurred annually in New England, though its numbers from year to year vary considerably. Our region is just south of its new wintering grounds, yet almost every year now a few reach the highlands of northern Rockland and Westchester Counties and northern New Jersey and in three years out of five we have a few records of small flocks elsewhere within our boundaries.

Though local records are now far too numerous to list, I must emphasize that the recording of this species in the New York City region is still a red-letter occasion and I know many an active observer who has yet to see this species locally.

An analysis of the seventy-three records before me reveals that the Evening Grosbeak has been recorded in every county in our region. The species has been seen near the Hall of Fame, New York City, as early as October 27, 1927 (Cruickshank), and in Bronx Park as early as November 13, 1915 (R. Williams), but such dates are exceptional as the bird seldom arrives before Christmas and the large majority of records are grouped in January and February. Records after the end of March are few, yet I find one from Douglaston, Long Island, as late as April 26, 1920 (G. C. Fisher), and another from Bronx Park as late as May 6, 1920 (R. Williams).

Eastern Purple Finch

Carpodacus purpureus purpureus (Gmelin)

The Purple Finch is particularly fond of hill country, showing a marked preference for areas where there is a rich mixture of coniferous and deciduous trees. Locally it seems especially partial to gardens, nurseries and estates, particularly in places where feeding stations are maintained. The bird is extremely erratic in its movements, and its numbers in any one locality are subject to remarkable variations from year to year. Throughout the greater part of the New York City region it is generally known only as an uncommon spring and a common fall transient and, depending on the year, a rare to locally common winter visitant. On the outer strip of Long Island it is rare in spring, uncommon in fall and purely casual at any other season. As a breeding bird it is very restricted. On Long Island a few pairs are sprinkled along the north shore from Sands Point to Miller Place and along the south shore from Mastic to East Hampton. A very

few pairs nest in Westchester County chiefly north of Ken-sico. Though Dr. Stone has listed the species as nesting in northern New Jersey and the country undeniably seems ideal, I can find no positive nesting evidence prior to June 8, 1941, when a pair was discovered completing a nest in High Point Park (C. Brown and A. Eynon).

Though the movements of the Purple Finch are somewhat irregular, the most normal picture may be described as follows: Small flocks generally arrive on the heels of the first light frost in September, but it is not until the first heavy frost in early October that any pronounced movement sets in. The peak of abundance for the entire year ordinarily comes between October 25 and November 15, and at this time the species is most widely distributed, and flocks consisting of several hundred birds may be encountered. By mid-December most of the Purple Finches have moved to the south of us, but flocks irregularly linger to the end of the year, and a few groups remain throughout the winter. In late March the return flight sets in. It continues throughout April and, though seldom as pronounced as the fall flight, occasionally produces large concentrations. By the middle of May most of the migrants have left for the north, but stragglers irregularly linger into June and non-breeding vagrants are a possibility throughout the summer. The bird usually places its nest in a dense conifer from fifteen to forty feet from the ground. There is but one brood, the only local date for eggs being June 23.

Pine Grosbeak

Pinicola enucleator leucura (Müller)

This rare and irregular winter visitant from the north is partial to areas where there are numerous conifers interspersed with patches of beech, mountain ash and sumach. Griscom mentioned ten marked flights to the New York City region since 1825, the last in the winter of 1903-04. The only

flight since that date was during the winter of 1929-30, but this invasion virtually missed Long Island. Excluding flight years the species is purely casual, a few irregularly reaching our region chiefly in northern Rockland County, northern Westchester County, northern New Jersey and eastern Long Island.

An analysis of the eighty-four records before me reveals that the Pine Grosbeak has been recorded in Englewood, New Jersey, as early as October 25, 1903 (Chapman), and at Orient, Long Island, as early as November 1, 1903 (Latham). Such dates are very unusual, however, as the species is casual before December, and the large majority of records are concentrated in this month and January. Records after February are very few, yet I find one from Orient, Long Island, March 23, 1924 (Latham), one from Riverdale, New York City, April 1, 1875 (Bicknell), and another from the Bronx region as late as April 12 (*vide* Chapman).

European Goldfinch

Carduelis carduelis carduelis (Linnaeus)

This striking European species was introduced at Hoboken, New Jersey, in 1878. It appeared in Central Park the following year and then spread to Englewood and the upper parts of New York City. The bird reached maximum abundance in the Englewood area around 1910, and individuals occurred even as far west as Caldwell. After such encouraging indications of the species' success in establishing itself, there was an abrupt decline and it disappeared from Central Park in 1907 and from Englewood in 1915. John Elliott has written me that the European Goldfinch appeared around Massapequa, Long Island, in 1910, and that he subsequently saw the species frequently enough not to regard it as a novelty by 1915-16. After that date the numbers fell off, but he saw birds intermittently throughout the twenties and early thirties and since then there has been a steady increase. This new infor-

mation adds light to the origin of the individuals that appeared at widely scattered points in the New York City region from time to time. The recent increase around Massapequa also corresponds with the recent increase in records elsewhere and with the appearance of several birds in Garden City in 1933. Since this latter year the increase in southern Nassau and southwestern Suffolk Counties has been remarkable, and there are now far too many records to list. As many as sixteen have been seen in a flock and the species has nested in Garden City, Baldwin, Freeport, Merrick, Seaford, Massapequa and Amityville. The birds in this section appear in early April and are generally easy to locate because of their loud, rich song. The nest is placed in a conifer or deciduous tree from five to thirty feet from the ground. There is but one brood, local egg dates ranging from April 26 to June 4. Immediately after the nesting season the birds seem to vanish, and records until the following spring are few and far between. Where the birds go is a mystery, as there are very few records at any time away from this small section of Long Island, and such records are sprinkled haphazardly throughout the year, giving no indication of migration periods. The bird even now is astonishingly rare over the larger part of Long Island, and many sections of Suffolk County are without a single record. Away from Long Island I find but ten records since 1915: two from New Jersey, three from Bronx County, one from Westchester County, three from Manhattan and one from Ward's Island.

Hoary Redpoll

Acanthis hornemanni exilipes (Coues)

An accidental visitant from the Arctic. A young male collected by Doctor Dwight in Van Cortlandt Park, Bronx County, on March 24, 1888, is the first specimen to be taken in New York State and apparently the southernmost capture in America.

Common Redpoll

Acanthis linaria linaria (Linnaeus)

This northern finch, though partial to birches and alders, is very adaptable, in flight years occurring wherever a rich supply of seeds is to be found, from the tallest trees in the highest mountains of northwestern New Jersey to the lowest shrubs along the outer beaches. It is a decidedly irregular winter visitant, usually very rare, occasionally common and periodically abundant as in the winters of 1919-20 and 1935-36 when flocks of over one hundred were regularly seen. A few undoubtedly reach our region every year, but in most counties it is recorded only three out of every five years. There are now numerous records for all sections, and I can see no point in listing a quantity of them.

The Redpoll has occurred at Elizabeth, New Jersey, as early as October 18, 1925 (Urner), and in Bronx Park as early as October 30, 1936 (Banner), but such appearances are remarkably early as the bird is purely casual before the end of November and ordinarily not recorded until late December or January, and occasionally not until February. Its time of appearance, its length of stay and its abundance for any one year are, however, absolutely unpredictable. In flight years flocks frequently linger to the middle of March. After this date the Redpoll is casual, yet I find records of birds at Heckscher Park, Long Island, April 21, 1939 (Cruickshank); Scarborough, Westchester County, April 29, 1900 (Fuentes and Thayer); Riverdale, New York City, May 4, 1875 (Bicknell).

Holboell's Redpoll

Acanthis linaria holboelli (Brehm)

An accidental visitant from the Arctic which has been taken but once in our region. A specimen collected at Miller Place, Long Island, March 22, 1888 (A. Helme), is now in the Dwight collection.

Greater Redpoll*Acanthis linaria rostrata* (Coues)

This species, though a rare and erratic winter visitor to the coast of New England, is occasionally abundant on the seaboard of Maine. E. H. Eaton states that several were collected on Shelter Island by Worthington; one of these, now in the American Museum, was taken on February 11, 1879. Specimens were also taken at Ossining, February 12 and 13, 1883, and recorded by A. K. Fisher.

Mr. John Elliott is certain that he saw one at Jones Beach, February 14, 1938. The bird was carefully studied through a fifty-power telescope and compared with a Common Redpoll feeding on the same branch. Mr. John Bull is likewise convinced that he saw a pair among a flock of Common Redpolls at Tuckahoe, Westchester County, February 28, 1936.

Pine Siskin*Spinus pinus pinus* (Wilson)

The Siskin, though partial to pines, hemlocks, alders and birches, occurs wherever there are trees and bushes. In the New York City region it is recorded on an average of four out of every five years, but its time of appearance, its length of stay and the numbers that will be present in any one season are absolutely unpredictable. Over the larger part of our region it is irregularly common in fall, uncommon in spring and, depending on the year, rare to common in winter. There is but one breeding record, Ossining, May 25, 1883 (A. K. Fisher).

The Siskin has arrived on Long Island as early as September 5, 1906 (*vide* Griscom), but such a record is unique as the next date is from Orient, Long Island, September 28, 1906 (Latham), and the species seldom arrives before the middle of October. The peak of abundance often comes in early November, and at times flocks consisting of several hundred

birds are recorded. Ordinarily numbers rapidly decrease during December, and only small groups remain throughout the winter. On the other hand at times our only records for the entire year come in a mid-winter invasion. If the Siskins have gone south in the fall there is usually a light return flight in April. At this season the bird is generally scarce, and it often goes unrecorded along the south shore of Long Island and in such places as Central and Prospect Parks. By the last week in April the Siskin is casual, yet stragglers have lingered in Central Park as late as May 24, 1917 (Janvrin), and in Riverdale, New York City, as late as June 10, 1893 (Bicknell).

Eastern Goldfinch

Spinus tristis tristis (Linnaeus)

During most of the year the Goldfinch is not very particular about the type of habitat it is in, its sole requirement being an abundance of seeds. One flock may be found feeding in a tall black birch in the heart of the woods, the next in a vast field of sunflowers and burdocks, and the next around a feeding shelf in the center of town. When the breeding season approaches, however, and the flocks break up, the pairs seek the open country and are most frequently seen bounding across shrubby meadows, fields and pastures. Throughout the larger part of our region the Goldfinch is a common permanent resident, at times abundant during migrations, often scarce or absent in winter. It does not breed on the outer strip of Long Island, however, and is purely casual there in summer. It has been extirpated as a breeder in Central Park and is now usually found there only during migrations.

After the majority of Goldfinches have finished nesting in late August family groups band together, begin to roam the countryside, and often show up in places where the species does not breed. As the autumn progresses the number of roaming flocks gradually increases. With the first killing

frost in early November there is a pronounced flight from the north, and maximum abundance for the fall is reached. By December the majority of Goldfinches have departed south and, depending on the food supply in any one locality, the species is common to rare throughout the winter. With the arrival of mild weather in late March a few flocks of loudly singing Goldfinches occasionally appear from the south, but these are only the vanguards to the spectacular widespread flight that comes around the middle of April. At this time maximum abundance for the entire year is reached, and flocks of one to six hundred may be encountered. This spring movement often continues well into May but rarely carries over into early June. The bird usually places its nest in a bush or sapling from three to twenty feet from the ground. There is but one brood, local egg dates concentrated in late July and early August, with extremes June 26 and August 24.

Red Crossbill

Loxia curvirostra pusilla Gloger

The Red Crossbill is eminently a bird of conifers. Its status in our region defies allocation as it is astonishingly erratic in its movements, has occurred in every month of the year except August and has even bred. There are records of large invasions when the species spent the winter in considerable numbers, but the last of these was during the winter of 1899-1900. Since then it has been exceedingly rare, and though a few probably reach our region every year it is seldom recorded in any one county more than two years out of five. Some years there are light flights in November, some years in winter and in others only during April and May. An analysis of all data reveals that there are numerous records between early November and mid-May for many localities, and I can see no point in listing a quantity of them in detail.

There is one record for Orient, Long Island, as early as September 17, 1908 (Latham), and a half dozen records from

widely separated points for the last half of October, yet the species must be considered purely casual in the fall before the initial week of November. In the spring I find a surprising number of records for May. In fact about one-third of all records from the Bronx Botanical Gardens in recent years have been during this month. The latest occurrences are Englewood, New Jersey, June 18, 1910 (*Bird-Lore*), and Millington, New Jersey, July 19, 1903 (Hix). There are two nesting records: Riverdale, New York City, April 22, 1875 (Bicknell); Miller Place, Long Island, April 10, 1883 (Helme).

Newfoundland Crossbill

Loxia curvirostra perna Bent

LeRoy Wilcox collected two specimens of this race at Riverhead, Long Island, on April 20, 1932.

Sitka Crossbill

Loxia curvirostra sitkensis Grinnell

Two pronounced flights of this northwestern subspecies have been recorded in the northeast. For details see "A Monograph Study of the Red Crossbill" by Ludlow Griscom in the *Proceedings of the Boston Society of Natural History* (1937, Vol. 41, No. 5, pp. 77-209). Five males have been collected locally: Hicksville, Long Island, January 2, 1888; Morristown, New Jersey, February 3, 1888; Setauket, Long Island, February 7, 1888; Hither Plains, Long Island, February 9, 1888; Hastings, Westchester County, April 10, 1893. Birds suspected of belonging to this race were seen in our region during the winter flight of 1940-41, but I cannot find a single definite record.

White-winged Crossbill

Loxia leucoptera Gmelin

The White-winged Crossbill is a bird of coniferous forests showing a decided preference for spruce and hemlocks. In our region it is a very rare and irregular winter visitant.

Griscom mentioned fourteen marked flights in the ninety-six years prior to 1923, the last during the winter of 1916-17 when the bird reached Washington, D. C., but skipped this region almost entirely. I can find no indications of a flight in recent years. In fact since the winter of 1899-1900 when the bird was abundant throughout the region there have been only twenty-seven scattered records of small flocks, some of which passed the winter in very limited areas where cones were abundant. The bird apparently occurs at the eastern end of Long Island more regularly than elsewhere in our region.

An analysis of all data reveals that the White-winged Crossbill has occurred on Long Island as early as October 25 (*vide* Griscom) and at Orient, Long Island, October 28, 1908 (Latham). The species is strictly casual before November 20, however, and most of the records fall between Christmas and the end of February. There are very few records after the middle of March, yet I find one from Riverdale, New York City, May 10, 1875 (Bicknell), and another from Scarborough, Westchester County, May 29, 1900 (Fuentes and Thayer).

Green-tailed Towhee

Oberholseria chlorura (Audubon)

This western species has occurred in Virginia and South Carolina. On December 23, 1939, William Norse and Irving Cantor, two young but keen observers, discovered a strange Towhee near Overpeck Creek, New Jersey. They saw the bird on several occasions up to January 30, 1940, had excellent opportunities to check carefully every point and are positive it was this species.

Red-eyed Towhee

Pipilo erythrophthalmus erythrophthalmus (Linnaeus)

This terrestrial bird occurs wherever there are trees and bushes, but it is very partial to dry, open woods with dense

patches of undergrowth, scrub covered grounds or extensive slash areas. In fact during the breeding season it is confined almost entirely to these preferred types of country and is uncommon to locally absent from moist rich woodlands. Over the larger part of the New York City region the Towhee is a very common summer resident, abundant during migrations, rare in winter. It even breeds on the outer strip of Long Island. Naturally as the suburbs expand, the species becomes increasingly uncommon as a breeder around the metropolis, yet some still nest within the city limits.

Because of the numerous winter records it is impossible to ascertain just which record constitutes the earliest arrival from the south. An analysis of all data indicates, however, that there is sometimes a very light movement during the first week in April. The first widespread movement, consisting almost entirely of males, ordinarily comes during the middle of this month and the peak of the spring flight not until three weeks later. At this season I have often recorded over one hundred Towhees in a day. By the end of May migration has usually ended, a very few stragglers irregularly passing through up to the second week in June. The bird nests on the ground or very near it. There are one or two broods, local egg dates concentrated in mid-May, with extremes May 8 and June 25. LeRoy Wilcox has estimated seeing and hearing four hundred Towhees in a day in mid-July in the scrub lands near Speonk, Long Island. There are sometimes indications of a light southward movement in August, but it is ordinarily not until the first frost in September that any widespread wave occurs. With the first heavy frost in October there is a marked wave, and within the next two weeks a fall peak is reached. After the middle of November the Towhee becomes very scarce, yet groups irregularly linger until Christmas, and there are now several dozen winter records representing all major localities.

Lark Bunting*Calamospiza melanocorys* Stejneger

This bird of the western plains is of accidental occurrence in the east. There are two records for our region, both from Long Island. One was collected at Montauk Point, September 4, 1888 (Evans), another at Miller Place, September 11, 1896 (Helme).

Ipswich Sparrow*Passerculus princeps* Maynard

The Ipswich Sparrow is confined almost exclusively to the narrow belt of sand dunes along the coast. It is a common transient visitant on all but the too built-up sections of the ocean strip of Long Island from Montauk to Brooklyn, a much less common transient visitant along the northern edges of all the bays on the south shore as well as around Peconic and Gardiner's Bays and on the Orient peninsula. Westward along the Sound the species becomes progressively scarcer and is purely casual west of Eaton's Neck. There is evidently a light flight down the north shore of the Sound, as I find fourteen records between Tod's Point, Connecticut, and Pelham Bay, Bronx County. The species is a fairly common transient visitant on the beaches of Staten Island. In New Jersey it is a common transient visitant all along the wilder stretches of ocean front, irregularly wanders into Raritan Bay and only casually reaches Newark Bay. The bird is decidedly less common in winter and at this season is confined almost exclusively to the wilder sections of sand dunes.

The Ipswich Sparrow has been seen at Orient, Long Island, as early as September 12, 1922 (Latham), and a specimen has been collected at Long Beach, Long Island, as early as September 28, 1912 (J. Weber). Such dates are unique, however, as the species seldom arrives until the first killing frost in late October or early November. November brings the peak of abundance for the entire year, and during this month I

have seen as many as twenty-seven individuals along the Jones Beach stretch in a single day. By the middle of December migration has usually ended, leaving but a few birds to pass the winter. John Elliott who has made very careful studies of this species estimates that four individuals winter along every five miles of good sand dune country between Jones and Fire Island Inlets. Late in February there are usually signs of a northward movement, but this return flight is ordinarily very light and often overlooked. After the middle of March the Ipswich Sparrow is a very rare bird, yet I find several records for April, the latest from Long Beach, April 25, 1926 (Hix).

Eastern Savannah Sparrow

Passerculus sandwichensis savanna (Wilson)

The Savannah Sparrow, though partial to extensive fields, pastures, the edges of brackish meadows and sand dunes, occurs in all types of open country, even frequenting the edges of mud flats and the banks of ponds and streams. Though in most parts of its range it nests chiefly in grassy fields and pastures, locally it is confined as a breeder to sand dunes, the edges or diked portions of salt marshes and the filled-in ground bordering tidal waters.

Throughout the greater part of the New York City region, the Savannah Sparrow is known only as a common to abundant transient visitant. It is a rare to locally not uncommon winter resident along the coast, being virtually absent during severe winters. In recent years it has shown definite signs of increasing as a breeder along our coastal meadows. On Long Island it now nests locally from Jamaica Bay to Montauk, as well as on Gardiner's Island and around Orient. A few pairs have nested on Staten Island and along the Sound in Bronx and Westchester Counties. In New Jersey there are old reports of its nesting at Morristown and Paterson. In

1922 Urner found the first pair breeding on the Newark Meadows. As diking and ditching progressed the birds increased and by 1935 he estimated over one hundred pairs to be present. The bird breeds very sparsely along the coast in Monmouth County.

In late August there are sometimes indications that a few Savannah Sparrows are on the move, but it is usually not until the first light frost in late September that any widespread wave arrives from the north. By mid-October a fall peak is reached, and at this season one may occasionally see several hundred individuals in a day along the coastal meadows. After the first killing frost in early November numbers quickly fall off, and by the end of the month the species is casual in the interior. Along the coast, however, flocks regularly linger until Christmas, and in mild seasons small groups remain throughout the winter. During the last week in March the return flight usually sets in. This movement, though heaviest in mid-April, continues well into May and often extends into the opening days in June. The bird nests on the ground. There are one or two broods, local egg dates concentrated during the last half of May, with extremes May 5 and June 28.

Labrador Savannah Sparrow

Passerculus sandwichensis labradorius (Howe)

The exact status of this bird in our region still awaits clarification. It can be positively identified only when collected and carefully compared and is undoubtedly of more regular occurrence than the two records indicate. One bird was picked up dead at Gilgo, Long Island, April 14, 1940 (J. Elliott). Another in the collection of the American Museum taken at Flatlands, Long Island, in 1880 has only recently been correctly identified.

Eastern Grasshopper Sparrow*Ammodramus savannarum australis* Maynard

The little Grasshopper Sparrow is confined almost exclusively to large uncultivated sandy fields, old dry pastures and dry grassy plains. As soon as such land is altered the bird disappears. In such habitats it is a common summer resident over the larger part of the New York City region. It still breeds as near to the metropolis as eastern Queens County, Staten Island, in Bergen County and on the recently diked portions of the Newark marshes. It has virtually disappeared as a nesting bird from southern Westchester County. Away from its breeding grounds the species is either astonishingly rare or is overlooked, the large majority of records coming during the peak of the spring flight in May.

A Grasshopper Sparrow was collected at West Orange, New Jersey, on the remarkable date of March 20, 1894 (Van Rensselaer), and the specimen is now in the Dwight collection. The next earliest records are Elizabeth, New Jersey, April 7, 1918 (Uerner), and Orient, Long Island, April 9, 1919 (Latham). The species ordinarily arrives in a marked wave during the first week in May, and stragglers are passing through up to the second week in June. The day one sees even one Grasshopper Sparrow away from its nesting grounds is unusual, but on the breeding grounds one may find a dozen or more in a single large field. The bird nests on the ground. There are one or two broods, local egg dates concentrated in early June, with extremes May 12 and July 4. Birds irregularly appear during the summer in places where the species does not breed. I have few data to indicate a clear-cut time for the beginning of fall migration, but it apparently starts sometime in mid-August and continues to the end of September. After this month the species is purely fortuitous, yet one specimen was collected on Staten Island, October 27, 1906 (J. Chapin); one was seen in Garden City, Long Island.

October 30, 1927 (J. T. Nichols); another was seen in Rahway, New Jersey, as late as November 5, 1924 (Urner).

Baird's Sparrow

Ammodramus bairdi (Audubon)

An accidental visitant from the western plains. A specimen was collected at Montauk, Long Island, on November 13, 1899 (A. Helme).

Eastern Henslow's Sparrow

Passerherbulus henslowi susurrans Brewster

This secretive little sparrow, though somewhat partial to wet meadows, regularly nests in dry weedy fields and abandoned pastures. Over the larger part of the New York City region it is known only as an extremely rare transient visitant. The bird is, however, definitely increasing as a summer resident. Since 1932 a few pairs have bred in central Rockland County, and several colonies have been established in Westchester County. Small groups are sprinkled along the south shore of Long Island from Jamaica Bay to Speonk, but all too frequent fires along this stretch force the birds to shift their breeding stations from year to year. In our portion of New Jersey there has been a marked increase in recent years, and whereas the species is extremely local as a summer resident it is quite widely distributed over the wilder sections of the state.

The Henslow's Sparrow has arrived in Bronx County as early as April 4, 1915 (L. N. Nichols), and in Mastic, Long Island, April 5, 1933 (Sedwitz). April 20 is a much more normal arrival date, however, and the majority of records from areas where the species does not breed are concentrated in May. There are several records of stragglers during the initial week in June and a few as late as the middle of this month. The bird nests on the ground. There is probably but one

brood, local egg dates concentrated in late May and early June, with extremes May 21 and June 24. Southbound birds have appeared in Elizabeth, New Jersey, as early as September 3, 1925 (Urner), but the large majority of fall dates are concentrated between September 25 and October 12. After mid-October the species is accidental, yet one bird lingered in Freeport, Long Island, to November 2, 1940 (Cruickshank); one in Scarborough, Westchester County, to November 3, 1897 (Thayer); and one on Shelter Island as late as November 20, 1901 (Worthington).

Acadian Sharp-tailed Sparrow

Ammospiza caudacuta subvirgata (Dwight)

This pale edition of the Sharp-tailed Sparrow is a fairly common transient on the larger salt marshes along the ocean and an uncommon transient on the salt marshes on both shores of the Sound, in Newark Bay and at the mouth of the Raritan River. Reports of birds from such places as up the Hudson River and from Hackensack River in New Jersey unquestionably refer to some other race and are rejected.

The Acadian Sharp-tailed Sparrow has been seen at Orient, Long Island, as early as September 24, 1914 (Latham), but it is normally the closing days of this month before the species arrives from the north. Maximum abundance comes during the fourth week in October. At this season the bird is occasionally locally common on such places as the Jones Beach strip, and I have often satisfactorily identified over a dozen individuals in a single day. With the first killing frost in November the species abruptly disappears, yet stragglers regularly remain until early December, and a very few sometimes winter. Careful studies at Jones Beach in 1940-41 indicated that a few Acadian Sharp-tailed Sparrows remained throughout the winter (J. Elliott). In addition there are records for Baychester, Bronx County, December 15 and 22.

1935 (Hickey *et al.*): Jones Beach, Long Island, December 26, 1933 (Vogt); Millneck, Long Island, February 17, 1940 (Cruikshank). A record of one at Oak Island Beach, Long Island, April 25, 1937 (Carleton and Sedwitz), must represent a bird that wintered locally or just to the south of us. In fact, the Acadian Sharp-tailed Sparrow is one of the latest of spring transients. At this season it is never common and its length of stay is short. It seldom arrives before May 20, reaches a peak during the last days of the month and then abruptly disappears. The latest records before me are: Mastic, Long Island, June 5, 1920 (J. T. Nichols), and Idlewild, Long Island, June 9, 1941 (J. Elliott).

Sharp-tailed Sparrow

Ammodramus caudacuta caudacuta (Gmelin)

This is a bird of the coast, being virtually confined to the salt marshes. It is so exacting that it generally avoids the very wet areas frequented by the Seaside Sparrow as well as areas that are not wet enough, and it is therefore rapidly decreasing or has been extirpated as a breeding bird from all areas where too much so-called mosquito control work is being carried on. Wherever the precise type of habitat occurs it is a common summer resident, an abundant transient and a rare to casual winter resident. On Long Island the Sharp-tailed Sparrow breeds commonly along the south shore from Jamaica Bay to Mecox Bay. Formerly a common summer resident along the edges of Peconic and Gardiner's Bays it has decreased markedly there in recent years due to constant burning of the grasses. It breeds locally along the north shore, the majority concentrated in the extensive marshes around Northport Bay, Crab Meadow Beach and Port Jefferson Harbor. Elsewhere in our portion of New York State the bird breeds commonly on Staten Island and much less commonly in the few remaining tidal marshes along the Sound in Bronx

and Westchester Counties. In New Jersey it breeds commonly in all the large salt marshes along the coast, and while formerly common around Newark Bay and at the mouth of the Raritan River it is steadily decreasing in both places.

Since a few Sharp-tailed Sparrows regularly winter it is impossible to say just which of our many early April dates marks the earliest arrival from the south. Since the species is always very rare in March it is safe to say that migrants definitely begin to trickle in during the second week in April. The first widespread wave never comes before April 25, however, and most of the birds arrive in May. At the height of the movement in late May it is possible to see well over one hundred individuals in a day along the south shore of Long Island. Stragglers are passing through up to the middle of June. The bird places its nest in a tussock of grass or in a pile of drift material. There are probably two broods, local egg dates concentrated in early June, with extremes May 19 and August 4. With the first light frost in late September southward migration sets in, and numbers build up to the peak of abundance for the entire year in mid-October when hundreds of Sharp-tails may be seen in a day in places like Jamaica Bay and on the Jones Beach strip. After October numbers gradually fall off, but a few birds regularly linger up to Christmas and a very few winter. The large majority of winter records are concentrated along the south shore of Long Island west of Fire Island Inlet.

Hudson Bay Sharp-tailed Sparrow

Ammospiza caudacuta altera Todd

Mr. Griscom has recently made a careful study of the Sharp-tailed Sparrow situation on the Atlantic coast, and on the basis of his research I am able to present the following pertinent facts. No specimen of *nelsoni* has ever been taken in the New York City region. All the specimens previously

recorded as *nelsoni* prove to be *altera* or intermediates between *caudacuta* and *subvirgata*. All birds from fresh-water marshes inland can fairly safely be assumed to be *altera*. In fact all inland specimens east of a line from Erie, Pennsylvania, to South Carolina prove to be *altera* regardless of what name they were previously given.

On the coastal salt marshes, however, the situation is quite different. The status of *caudacuta* and *subvirgata* has already been given in detail. I must emphasize that only absolutely typical examples of *subvirgata* can be identified in the field and then only by people thoroughly familiar with museum series. Birds actually *altera* or *caudacuta* + *subvirgata* can also be identified as a third element under very favorable conditions. But to separate this last element into its two component parts is a critical matter only to be tackled by a museum expert with specimens. *Sight records are guesses only*. There is only one typical specimen of *altera* collected locally in spring, Staten Island, May 30, 1908. This subspecies, however, is probably a regular fall transient. Typical specimens have been collected at Piermont, Rockland County, October 19, 1889; Rockaway, Long Island, October 5, 1907, and October 14, 1911; Staten Island, four specimens between October 10 and 27, 1906, and 1907. A bird seen as far inland as Troy Meadows, New Jersey, May 25, 1941 (Edwards), was undoubtedly *altera*.

Northern Seaside Sparrow

Ammospiza maritima maritima (Wilson)

The dingy Seaside Sparrow is virtually confined to the wetter portions of our larger salt marshes. On Long Island it breeds commonly around Jamaica Bay and in most sections where there is the required habitat eastward to Fire Island Inlet. Over the larger part of Great South Bay good Seaside Sparrow habitat is surprisingly limited, and naturally the bird

is rare to unknown as a breeder. South of Patchogue suitable marshes reappear, and from there the bird breeds locally along the south side of the bays eastward to Westhampton Beach. A few pairs nest in Shinnecock Bay. The bird has disappeared as a summer resident from Orient and is now known only as a rare transient visitant east of Shinnecock Bay and in the marsh lands along the Sound. The Seaside Sparrow breeds commonly on the south shore of Staten Island and sparsely on the few remaining large tidal marshes on the eastern shores of Bronx and Westchester Counties. In New Jersey it is a common summer resident only in the extensive salt marshes along the coast. Due to the constant ditching and diking operations in recent years the bird has nearly been extirpated as a breeder from both Raritan and Newark Bays. Away from salt marshes the Seaside Sparrow is accidental. I find a record for Central Park, May 16, 1923 (Griscom), one for Van Cortlandt Park, April 30, 1939 (Norse), and several for the Hudson River as far north as Ossining (A. K. Fisher).

Due to the numerous winter records it is impossible to say which date constitutes the first arrival from the south. An analysis of all data reveals, however, that while there is sometimes a light flight in mid-April, the first widespread movement seldom comes before the initial week in May. A spring peak is reached during the third week of this month, and at this time I have recorded over one hundred Seaside Sparrows in a day of energetic splashing in the marshes along the Meadowbrook Causeway and on the Jones Beach stretch. Stragglers are passing through up to the second week in June. The bird usually suspends its nest just above high tide mark in the grasses or in piles of driftwood. There is probably but one brood, local egg dates concentrated in early June, with extremes May 23 and July 2. With the first light frost in September a definite southward movement sets in. It reaches a peak during the middle of October and is virtually con-

cluded by the middle of November. A number of birds regularly linger until Christmas, and a few remain on the larger marshes throughout the winter.

Eastern Vesper Sparrow

Poocetes gramineus gramineus (Gmelin)

The Vesper Sparrow generally demands dry upland fields, pastures and plains for its breeding grounds and is therefore rather local in its distribution as a summer resident. On Long Island it breeds sparsely in Queens County, commonly at the eastern end of the Hempstead Plains, thinly elsewhere in Nassau County and fairly commonly though locally throughout Suffolk County. It is a fairly common summer resident in Rockland and northern Westchester Counties, decreases abruptly south of White Plains and has long been extirpated as a summer resident in Bronx County. In our portion of New Jersey it is a locally common summer resident in most sections except in the suburban areas where it is generally rare to unknown as a breeding bird. Over the larger part of the New York City region the Vesper Sparrow is a common transient visitant. It is, however, astonishingly rare at any time in such places as Central and Prospect Parks and is generally very rare in spring along the outer strip of Long Island.

During the last week in March there is often a light flight of Vesper Sparrows from the south, but it is usually the first week in April before any widespread movement sets in. A spring peak is reached around the middle of this month, and during pronounced waves I have recorded as many as fifty-three individuals in a day in northern Westchester County. By the end of April migration is virtually concluded, and only stragglers are passing through up to the fourth week in May. The bird nests on or near the ground. There are generally two broods, local egg dates concentrated in the second

and third weeks of May, with extremes May 2 and July 14. In late August a few birds often show up in places where the species does not breed, and in September this movement becomes somewhat more definite, but it is generally not until the first heavy frost in early October that pronounced southward migration sets in. A fall peak usually comes during the third week of this month, and by November most of our Vesper Sparrows have departed for the south. The bird is much more common and much more widely distributed in fall than it is in spring. Small flocks irregularly linger into the first half of December, and during mild seasons a very few hardy individuals remain throughout the winter. Most of the wintering records are concentrated in the lowlands near the coast.

Eastern Lark Sparrow

Chondestes grammacus grammacus (Say)

This striking sparrow from the west is very partial to dry, sandy fields. It has very slowly but definitely extended its range eastward and in the last decade has been recorded annually at numerous points in the northeast. To-day it must be considered a very rare but regular visitant to the shores of Long Island but a casual visitant elsewhere in the New York City region.

I find thirty-two Long Island records, all from around the periphery of the Island and the large majority from the southern and eastern shores. The two June records are Orient, June 1, 1927 (Latham), and Montauk, June 12, 1922 (J. T. Nichols). The three July records are: Shelter Island, July 7, 1924 (Latham); Jones Beach, July 25, 1936 (Bohn, Sabin and Sedwitz); and eastern Long Island, July 28, 1902 (Worthington). There are twelve records for August, seven for September, five for October and three for November. The two latest are Idlewild, November 8-13, 1935 (Mayer).

and a specimen collected at Miller Place, November 27, 1899 (Helme).

Elsewhere in our portion of New York State I find but four records: Riverdale, April 11, 1939 (Griscom); Purchase, May 20, 1933; Purchase, October 15, 1925; White Plains, October 16, 1925 (all three by Miss E. Phillips).

Whereas there are several records for the south New Jersey coast, I know of but three for our portion of that state. One was picked up dead in Essex County, September 19, 1934 (Kohler); one was seen in Elizabeth, October 28, 1928 (Urner), and one was collected at Dumont, November 26, 1885 (Chapman).

Bachman's Sparrow

Aimophila aestivalis bachmani (Audubon)

An accidental visitant from the south. Mr. J. A. Weber collected a singing male at Fort Lee, New Jersey, on May 9, 1918.

Slate-colored Junco

Junco hyemalis hyemalis (Linnaeus)

The Junco is an exceptionally adaptable bird, and during migrations it occurs commonly throughout the region in almost every conceivable type of habitat from the heart of the climax woodlands in northwestern New Jersey to the small parks and yards of the metropolis and the sand dunes of the outer strip. It is naturally least common around New York City and along the ocean beaches. Though less numerous in winter, it is nevertheless one of our most common and conspicuous winter residents.

A Junco was seen in Miller Place, Long Island, as early as August 15, 1929 (G. Helme), and another in Rye, Westchester County, as early as August 15, 1941 (Bull). There are several records for the last week in August and early September, but it is usually not until the first light frost in late September

that any marked wave arrives. A fall peak is reached around the third week in October, and at that season the bird is widely distributed and it is not exceptional to see several hundred individuals in a day. By mid-November the bulk of migrants has passed south, and whereas the winter population is fairly stable there are minor movements even in January. With the first pronounced thaw in late February a light flight of Juncos returns from the south, but it is ordinarily mid-March before the large flocks of singing Juncos commence to pass through. This spring movement reaches a peak around the first week in April and tapers off by the end of the month. After the first week in May the Junco is purely casual, yet I find several records for late May and two for Westchester County as late as June 2, 1926 (Coles), and June 5, 1933 (Halle). A record of one in Hither Woods, Long Island, July 16-23, 1929 (Helmuth), is unique.

Oregon Junco

Junco oreganus subspecies

Doctor William T. Helmuth reports a very satisfactory identification of an Oregon Junco in East Hampton, Long Island, October 8, 1932, and Mr. Edward Chalif who has had wide experience in the west reports seeing one in Bernardsville, New Jersey, in November of 1938. Specimens of both *montanus* and *oreganus* have been collected in the east, but just which subspecies has occurred locally still awaits substantiation. For the time being the Oregon Junco must be kept on our list of hypothetical birds.

Eastern Tree Sparrow

Spizella arborea arborea (Wilson)

This cheerful little sparrow from the far north prefers open country, being especially fond of bushy marsh lands and brushy thickets bordering weedy fields. It is a common

winter visitant throughout the New York City region, but it occurs most commonly during the peaks of migration in December and early March. This latter statement is especially true in such places as Central Park, Prospect Park and the outer strip of Long Island where the winter population is generally very small.

The Tree Sparrow has been seen in Van Cortlandt Park, New York City, as early as September 16, 1934 (Norse), in Bernardsville, New Jersey, as early as October 4, 1929 (Kuser), and there is a light sprinkling of records for the second week in this latter month. Such dates are decidedly unusual, however, as the species rarely arrives until the first killing frost in late October or early November. The peak of abundance usually comes in December, and during this month I have often seen over one hundred and occasionally as many as three hundred in a day of vigorous birding in Westchester County. Numbers generally decline during January and early February, but with the coming of the first pronounced thaw in late February a return movement sets in and continues throughout March. After this month the Tree Sparrow is purely casual, yet years of intensive birding have produced several dozen records for April, one for Troy Meadows, New Jersey, May 5, 1929 (Clausen); one for Idlewild, Long Island, May 6, 1937 (Mayer); a record of two birds that repeatedly returned to a large sparrow trap in Rye, Westchester County, throughout April and remained as late as May 8, 1937 (Oboiko and Cruickshank); and a record of one bird at Troy Meadows, New Jersey, as late as May 12, 1941 (Rusling).

Eastern Chipping Sparrow

Spizella passerina passerina (Bechstein)

This tamest of all sparrows, though occasionally nesting in the woods, is particularly fond of farmyards, gardens, village parks, orchards and hedgerows. It is a common sum-

mer resident and a very common transient visitant throughout the region except in our more crowded city parks and along the outer strip of Long Island where it is rare to unknown as a breeder. Though it seeks the proximity of man, it evidently cannot stand too much crowding and is steadily decreasing as a summer resident around the ever-expanding metropolitan area.

There is apparently an irregular and extremely light movement of Chipping Sparrows into our region during mid-March, but the species generally does not arrive until the last few days of this month or early in April, and a spring peak is not reached until the first week in May. At this season I have recorded eighty-four individuals in a day of birding in Westchester County, but much higher counts are undoubtedly possible. By the third week in May migration is virtually concluded, and only stragglers are passing through up to the first week in June. The bird nests in bushes, trees, vines and arbors from five to fifty feet from the ground. There are one or two broods, local egg dates concentrated in the last half of May, with extremes May 10 and July 26. In August the birds gather in small flocks, roam the countryside and irregularly show up in such places as small city parks where the species does not breed. With the coming of the first light frost in September there is a marked southward migration, and the great mass of birds passes through within the next four weeks. After the initial week in November the Chipping Sparrow is a very rare bird, yet a few regularly linger into December and, though the species is extremely rare in winter, years of intensive birding by hundreds of observers have produced too many winter records for me to list.

Clay-colored Sparrow

Spizella pallida (Swainson)

This pale sparrow of the north central states has twice

been reported in our region: Jones Beach, Long Island, September 30, 1934 (Breslau, Sedwitz *et al.*), and Southampton, Long Island, October 14, 1933 (Helmuth). Though both identifications were made by experienced observers, the fall plumages of this species and the Chipping Sparrow offer too easy a chance for error, and it seems advisable that the Clay-colored Sparrow be left on the hypothetical list for the time being.

Field Sparrow

Spizella pusilla pusilla (Wilson)

The Field Sparrow is partial to scrubby fields, neglected pastures, hedgerows bordering farmlands and bushy thickets near the edges of woods. It is a common summer resident throughout the larger part of the New York City region except in the crowded metropolitan area and along the outer strip of Long Island where it does not breed. It is a very common transient visitant throughout and, though purely casual from mid-December to late March in the highlands of the interior, it winters regularly and occasionally in some numbers near the coast.

The first pronounced spring flight generally arrives during the last week in March and builds up to maximum abundance by the third week in April, at which season I have recorded over fifty Field Sparrows in a day of birding in Westchester County. By the middle of May migration is virtually concluded, yet stragglers are irregularly passing through up to the opening days of June. The bird nests on or near the ground. There are two, rarely three broods, local egg dates concentrated in late May and early June, with extremes May 6 and July 13. After the breeding season the birds gather in small flocks and begin to roam. With the arrival of the first light frost in late September a pronounced southward movement sets in and reaches a peak by the third week in October. Subsequently numbers fall off, and by the

middle of November most of the Field Sparrows have departed for the south leaving the few hardy birds to pass the winter in the brushy fields and spring-fed swamps near the coast.

Harris's Sparrow

Zonotrichia querula (Nuttall)

This handsome sparrow was carefully studied in Troy Meadows, New Jersey, May 7, 1935 (E. Eliot, Janvrin and Tucker). Specimens have been collected in Massachusetts, and I can see no grounds for questioning a sight identification by such experienced observers of so distinct a species.

White-crowned Sparrow

Zonotrichia leucophrys leucophrys (Forster)

The beautiful White-crowned Sparrow is most frequently found at the edges of brushy thickets, along hedgerows or on lawns near dense ornamental shrubbery. Throughout the larger part of the New York City region it is an uncommon spring and a fairly common fall transient and is purely casual in winter.

Birds have been seen at Orient, Long Island, as early as September 23, 1940 (Latham), and at Seaford, Long Island, as early as September 24, 1938 (J. Elliott), but the first widespread wave never arrives before the first heavy frost in early October. The peak of abundance for the entire year generally comes during the middle of this month, and at this season one will occasionally have the good fortune of seeing several dozen individuals in a day. By the first week in November the fall movement is virtually concluded, yet a few birds irregularly linger into December, rarely remain into January, and I know of but two records where a bird actually passed the larger part of the winter: Ridgewood, New Jersey, 1925-26 (Walsh) and Rye, Westchester County, 1939-40 (Oboiko *et al.*). There is occasionally a very light

trickle of migrants returning from the south as early as the last three weeks in April, and years of intensive birding by hundreds of observers have produced far too many such records to list. The bird seldom arrives, however, before May 10, and may only be expected with any degree of certainty during the biggest waves in the third week of this month. This spring movement is astonishingly light, and the day one sees even three or four is very unusual. A few birds irregularly linger up to the end of May, and one was seen at Elmsford, Westchester County, as late as June 14, 1933 (Fry).

White-throated Sparrow

Zonotrichia albicollis (Gmelin)

The White-throated Sparrow is partial to the weedy edges of woodland roads, bushy fields, hedgerows, extensive slash areas and the undergrowth of open woodlands. Throughout the New York City region it is known chiefly as a common spring and an abundant fall transient visitant. Small flocks regularly winter near the coast and near the southern boundaries of our section of New Jersey, the number for any one year depending on the severity of the winter. The bird is purely casual in summer.

The species has been seen in City Hall Park, New York City, as early as August 15, 1930 (Eaton), and in Union County, New Jersey, August 18, 1925 (Urner), but such records are unique as the bird is casual before the second week in September and never arrives in numbers until the first light frost late in this month. The peak of abundance for the entire year comes during the middle of October, and at this season I have recorded several hundred birds in a vigorous day of birding on Long Island. By the third week in November migration is virtually over, yet many groups regularly linger into December, and a few remain to pass the winter in some sheltered ravine or around a feeding station.

Late in March there are often indications of a return flight, but the first pronounced wave generally comes in early April, and a spring peak is never reached until three weeks later. By the third week in May the White-throated Sparrow becomes very scarce, yet a few irregularly linger into June, and I find records of one in Central Park, July 2, 1907 (Chubb); a singing male at Palisades, Rockland County, July 4, 1935 (Deed); another singing male in Secaucus, New Jersey, July 7, 1935 (Edwards, Eaton, R. Peterson), and one that was captured and banded in Essex County, New Jersey, July 14-31, 1923 (Howland). "There is a set of eggs in the Hallinan collection in Paterson Museum, marked as taken in Short Hills, June 5, 1894, but there may be some error about the locality" (W. Eaton).

Fox Sparrow

Passerella iliaca iliaca (Merrem)

This large handsome sparrow has one of the most beautiful songs of all local birds. Though preferring bushy thickets, hedgerows and the undergrowth in open woodlands, it occurs as a common transient visitant throughout the New York City region wherever there are trees and bushes. In winter it is generally rare, the few flocks being confined chiefly to spring-fed thickets or feeding stations in the lowlands near the coast.

A record of one in Central Park on August 9, 1913 (Griscom), is unique as the next earliest date is from Bronx County, September 30, 1928 (Kuerzi), and the species ordinarily does not arrive until the first heavy frost in October. A fall peak is reached soon after the first killing frost in November, and at this season one will occasionally see as many as one hundred individuals in a day. By early December only the winter population remains. This varies considerably from year to year but it is generally very small and confined chiefly to the lowlands. With the first pronounced thaw in



late February or early March the return flight sets in. It is ordinarily very heavy and abrupt, the majority of birds passing through in a few spectacular waves, and one lucky enough to encounter one of these movements will often record over two hundred sweetly singing birds. I find an estimate of seven to eight hundred around Franklin Lake, New Jersey, March 25, 1933 (Fry and Griffin). Occasionally there are light waves in April, but by the third week of this month the Fox Sparrow is a rarity. The latest records before me are: Inwood, New York City, May 6, 1937 (Karsch); Riverhead, Long Island, May 9, 1929 (Wilcox); Troy Meadows, New Jersey, May 11, 1941 (Eynon).

Lincoln's Sparrow

Melospiza lincolni lincolni (Audubon)

This shy, secretive, little sparrow is generally overlooked as it skulks along the bushy borders of ponds, streams and swamps or in the thickets at the edges of moist woodlands. Over the larger part of the New York City region it is an uncommon transient, being least common along the south shores of Nassau and Suffolk Counties.

The Lincoln's Sparrow has been reported as seen in Riverside Park, New York City, as early as April 11, 1930 (Vogt), in Mill Neck, Long Island, as early as April 21, 1935 (Harrower and Rand), and there are now several reports for late April and early May. The bird is, however, purely casual before May 10 and is generally recorded only during the biggest waves in the middle of the month. One always considers oneself fortunate to find this species in our region, yet I have seen as many as six in a day around Troy Meadows, New Jersey. One straggler was banded at Elmhurst, Long Island, May 28, 1935 (Beals), and Griscom lists a record for Long Island as late as June 3. Due to the dense vegetation the species is much more difficult to find in the fall. One very early individual arrived in Bronx County as early as



August 31, 1934 (Norse), but it is ordinarily not until the third week in September that the species arrives from the north. The bulk of birds passes through during the last week in September and the first week in October, and by the middle of this latter month migration is virtually concluded. I find one record for Dyker Heights, Brooklyn, November 10, 1927 (Johnston); one for Parkville, Long Island, November 27, 1894 (F. Johnson), and another for Long Island as late as November 29 (Braislin).

Swamp Sparrow

Melospiza georgiana (Latham)

During the breeding season the Swamp Sparrow is confined chiefly to fresh-water swamps, flooded meadows or the marshy edges of ponds, lakes and streams, yet in a few localities along the coast it even nests in the brackish portions of salt marshes. On migrations it regularly leaves the marsh lands and occurs in all types of habitat with the exception of deep woodlands. Over the larger part of the New York City region the species is common to abundant during migrations. It nests commonly in all major sections but Long Island, and winters regularly in the spring-fed marshes around the metropolitan area. It is naturally decreasing as a summer resident around the ever-expanding metropolis, and due to ditching and diking has decreased markedly on the Newark marshes. On Long Island it is astonishingly rare as a summer resident when one considers the vast areas of apparently ideal habitat. Griscom found the bird breeding at Long Beach in 1908 and says that it once nested commonly at Jones Beach. Latham has reported the bird as breeding at Greenport. At present a few pairs nest locally in Queens County and around the Jamaica Bay section of Brooklyn, and a pair or two irregularly nest at Valley Stream, Freeport, Lindenhurst and Flanders.

During the last week in March a few Swamp Sparrows often arrive from the south, but it is usually the first week in April before any widespread wave sets in and always late April or early May before maximum abundance is reached. At this season the bird is widely distributed, and in the extensive Troy Meadow marshes of New Jersey I have estimated seeing or hearing over seventy in a full day of birding. By mid-May migration is virtually over, yet stragglers are passing through up to the first half of June. The bird usually nests in a tussock just above the water. There are one or two broods, local egg dates concentrated in the last half of May, with extremes May 6 and June 28. With the coming of the first light frost in late September the southward migration sets in, and the bulk of birds passes through during October. After the first killing frost in early November the Swamp Sparrow is purely casual in the highlands of the interior, but in the spring-fed marshes around New York City many regularly linger until Christmas, and some always remain to brave the winter.

Eastern Song Sparrow

Melospiza melodia melodia (Wilson)

The Song Sparrow, one of our most common, most generally known and most widely distributed permanent residents, is a very adaptable bird, nesting commonly throughout the New York City region in all but the too crowded sections and in the dense woodlands. It is very partial to moist areas where deep thickets abound. Though a permanent resident, banding records indicate that few of the breeding birds winter. The species is decidedly most common during migrations from late February to mid-May and from the first frost in September to the middle of November, and in such places as Central Park is common only during the peaks of these movements in March and October. During these months I have often seen over one hundred Song Sparrows in a day,

and during pronounced movements have estimated seeing over two hundred in a day in the lowlands of Westchester County. The bird usually nests on the ground or in a low bush, occasionally in a tree twelve feet above the ground. There are two, three and occasionally four broods, local egg dates concentrated in the middle two weeks of May, with extremes April 20 and August 14.

Lapland Longspur

Calcarius lapponicus lapponicus (Linnaeus)

In our region the Lapland Longspur is most frequently found along the coast, being partial to grassy fields, parkway lawns, filled-in grounds, the edges of brackish meadows and plowed fields. It is ordinarily found associating with Horned Larks or Snow Buntings. Along the south and eastern shores of Long Island and on the Newark marshes it is an uncommon fall transient visitant, a much less common winter resident and a rare spring transient visitant. Its numbers from year to year are subject to considerable variations. The bird occurs rather regularly but in smaller numbers and with less frequency on the plowed fields in the interior of Nassau and Suffolk Counties, along the north shore of Long Island, on the south shore of Staten Island and along our portion of the New Jersey coast. On the north shore of the Sound and on the Van Cortlandt Parade Grounds in Bronx County it is an even rarer bird and is usually recorded only in November. Though years of intensive birding have produced numerous records at widely scattered points in the interior, locally the bird is purely casual away from the coastal plain. It must be emphasized that one is fortunate to see this species anywhere in our region.

A Lapland Longspur was collected at Shinnecock Bay, Long Island, August 12, 1881 (Dutcher), but this record is unique as the next earliest date is from Quogue, Long Island,

October 3, 1926 (F. E. Watson), and the species ordinarily does not arrive until the end of this latter month. About eighty per cent of all local records come in November or December, and while most records are of one or two birds I find a count of thirty-five for the Newark marshes on December 17, 1933 (Urner), and a count of sixty for Oak Island Beach, Long Island, November 18, 1934 (Rose, Sedwitz *et al.*). By Christmas numbers generally fall off, but the winter population is erratic and unpredictable, and during some years all local records are in January or February. In late February or early March there is occasionally evidence of a very light return flight. By mid-March most of the Longspurs have departed for their breeding grounds, yet a few irregularly linger to the beginning of April, and I find a report for Dyker Heights, Brooklyn, April 17, 1926 (Nathan), and a record of one collected on the Hempstead Plains, Long Island, April 18, 1885 (Dutcher).

Chestnut-collared Longspur

Calcarius ornatus (J. K. Townsend)

This bird from the Great Plains is purely casual in the east. Two specimens have been taken in the New York City region, both on Long Island: Miller Place, September 14, 1891 (A. H. Helme); Long Island City, February 16, 1889 (Hendrickson).

Snow Bunting

Plectrophenax nivalis nivalis (Linnaeus)

In our region the Snow Bunting is essentially a bird of the coastal strip, being a common winter visitant along the beaches, on the extensive salt meadows, and on the larger plains and fields near the ocean. It decreases abruptly as one leaves the ocean front and is surprisingly uncommon even on the north shore of Long Island west of the Orient penin-

sula. It occurs regularly, though generally sparsely, along the brackish meadows of Bronx and Westchester Counties, on the Newark Meadows and at the mouth of the Raritan River in New Jersey. Inland it is generally rare and irregular, though periodically large flocks do occur and there are now numerous records for all major localities. There seems to be great variation in numbers from year to year. Some years it is positively abundant on the outer beaches and rather widely distributed inland. Other years it is rather uncommon even along the coast and is virtually unrecorded elsewhere.

The Snow Bunting has been seen at Idlewild, Long Island, as early as October 3, 1941, and October 4, 1937 (Mayer), and at Orient, Long Island, as early as October 9, 1919 (Latham), but such dates are exceptional as the species seldom arrives before the first killing frost which ordinarily comes towards the end of the first week in November. With each succeeding cold snap the number of Snow Buntings increases, and by late November or early December maximum abundance for the entire year is reached. During this season I have often seen over one hundred in a day, and during remarkable flights I have estimated seeing over five hundred in a day along the south shore of Long Island. By Christmas numbers ordinarily fall off, and the population for the remainder of the winter is subject to such peculiar fluctuations that any statement of the bird's abundance would be misleading. It is, however, usually one of the typical winter visitants of the coastal strip. Sometimes there is a very light return flight during the last half of February. By mid-March the Snow Bunting is a very rare bird, yet stragglers irregularly linger to the end of the month, and I find records for Dyker Heights, Brooklyn, April 9, 1926 (Cruickshank), and Idlewild, Long Island, April 14, 1934 (Mayer).

INDEX

- Acanthis hornemanni exilipes*, 441
 linaria holboellii, 442
 linaria linaria, 442
 linaria rostrata, 443
Accipiter cooperi, 132
 velox velox, 130
 Accipiters, 129
 ACCIPITRINAE, 129
Actitis macularia, 187
Aechmophorus occidentalis, 53
Agelaius phoeniceus phoeniceus, 420
Aimophila aestivalis bachmani, 461
Aix sponsa, 102
Alauda arvensis arvensis, 301
 ALAUDIDAE, 301
Alca torda, 251
 ALCEDINIDAE, 278
 ALCIDAE, 250
Alle alle, 253
Ammodramus bairdi, 453
 savannarum australis, 452
Ammospiza caudacuta altera, 456
 caudacuta caudacuta, 455
 caudacuta subvirgata, 454
 maritima maritima, 457
Anas platyrhynchos platyrhynchos, 91
 rubripes rubripes, 92
 rubripes tristis, 92
 ANATINAE, 91
 Anis, 258
Anser albifrons albifrons, 87
 ANSERINAE, 82
Antrostomus vociferus vociferus, 272
Anthus spinoletta rubescens, 355
Aquila chrysaetos canadensis, 139
Archilochus colubris, 277
Ardea herodias herodias, 66
 ARDEIDAE, 66
Arenaria interpres morinella, 177
Arquatella maritima, 195
Asio flammeus flammeus, 269
Asio wilsonianus, 268
Astur atricapillus atricapillus, 129
 Auks, Murres and Puffins, 250
 Auk, Great, 250
 Razor-billed, 251
 Avocet, 215
 Avocets and Stilts, 215
Baeolophus bicolor, 323
 Baldpate, 95
Bartramia longicauda, 184
 Bittern, American, 77
 Eastern Least, 78
 Bitterns, 66
 Blackbird, Rusty, 424
 Yellow-headed, 420
 Blackbirds, 417
 Bluebird, Eastern, 349
 Bluebirds, 340
 Bobolink, 417
 Bob-white, 151
Bombycilla cedrorum, 356
 garrula pallidiceps, 356
 BOMBYCILLIDAE, 356
Bonasa umbellus umbellus, 150
 Boobies and Gannets, 61
 Booby, White-bellied, 61
Botaurus lentiginosus, 77
 Brant, American, 85
 Black, 86
Branta bernicla hrota, 85
 canadensis canadensis, 82
 leucopsis, 87
 nigricans, 86
Bubo virginianus subarcticus, 263
 virginianus virginianus, 263
 Buffle-head, 112
 Bunting, Indigo, 435
 Lark, 449

- Painted, 436
 Snow, 475
 Buntings, 432
Buteo borealis borealis, 133
 lagopus sancti-johannis, 138
 lineatus lineatus, 134
 platypterus platypterus, 136
 BUTONINAE, 133
 Butcos, 133
Butorides virescens virescens, 72
 Buzzard Hawks and Eagles, 133

Calamospiza melanocorys, 449
Calcarius lapponicus lapponicus,
 474
 ornatus, 475
Calidris canutus rufus, 194
Camptorhynchus labradorius, 115
 Canvas Back, 105
Capella delicata, 180
 CAPRIMULGIDAE, 272
 Cardinal, Eastern, 432
Carduelis carduelis carduelis, 440
Carapodacus purpureus pur-
 pureus, 438
Casmerodius albus egretta, 67
 Catbird, 336
Catharacta skua, 222
Cathartes aura septentrionalis, 126
 CATHARTIDAE, 126
Catoptrophorus semipalmatus
 inornatus, 189
 semipalmatus semipalmatus,
 189
Centurus carolinus, 284
Ceophloeus pileatus abieticola, 282
Cephus grylle grylle, 254
 CERTHIDAE, 327
Certhis familiaris americana, 327
Chactura pelagica, 276
 CHARADRIIDAE, 168
Charadrius melodus, 168
 semipalmatus, 170
Charitonetta albeola, 112
 Chat, Yellow-breasted, 410
Chauleasmus streperus, 93
Chen caerulescens, 90
 hyperborea atlantica, 88
 hyperborea hyperborea, 88
 Chickadee, Acadian, 322
 Black-capped, 320
 Carolina, 321
 Hudsonian, 322
Chilidonias nigra surinamensis, 247
Chondestes grammacus gramma-
 cus, 460
Chordeiles minor minor, 273
 CICONIIDAE, 79
 CIRCINAE, 141
Circus hudsonius, 141
Cistothorus stellaris, 333
Clangula hyemalis, 113
Coccyzus americanus americanus,
 258
 erythrophthalmus, 259
Colaptes auratus luteus, 280
Colinus virginianus virginianus,
 151
Columba livia, 255
 COLUMBIDAE, 255
Columbigallina passerina passer-
 ina, 257
 COLYMBIDAE, 50
Colymbus auritus, 52
 grisegena holboelli, 50
 nigricollis, 53
 COMPSOTHYLIPIDAE, 370
Compsothlypis americana pusilla,
 381
Conuropsis carolinensis carolin-
 ensis, 258
 Coot, American, 165
 Coots, 155
Coragyps atratus atratus, 128

- Cormorant, Double-crested, 65
 European, 64
 Cormorants, 64
Corthylio calendula calendula, 354
 CORVIDAE, 314
Corvus brachyrhynchos brachyrhynchos, 317
 ossifragus, 318
 corax principalis, 316
Coturnicops noveboracensis, 160
 Cowbird, 429
 Crane, corn, 163
 Cranes, 154
 Crane, Whooping, 154
Creciscus jamaicensis stoddardi, 162
 Creeper, Brown, 327
 Creepers, 327
Crex crex, 163
Croceothia alba, 214
 Crossbill, Red, 445
 Newfoundland, 446
 Sitka, 446
 White-winged, 446
 Crow, Eastern, 317
 Fish, 318
 Crows and Jays, 314
Cryptoglaux acadica acadica, 271
 funera richardsoni, 270
 Cuckoo, Black-billed, 259
 Yellow-billed, 258
 Cuckoos, Anis, etc., 258
 CUCULIDAE, 258
 Curlew, Eskimo, 183
 European, 182
 Hudsonian, 182
 Long-billed, 181
 CYGNINAE, 81
Cyanocitta cristata cristata, 314
Cygnus columbianus, 81
Dafila acuta tzitzihua, 96
Dendroica aestiva aestiva, 382
 caerulescens caerulescens, 386
 castanea, 397
 cerulea, 392
 coronata, 388
 discolor discolor, 399
 dominica albilora, 394
 dominica dominica, 394
 fusca, 393
 magnolia, 384
 palmarum hypochrysea, 401
 palmarum palmarum, 401
 pensylvanica, 394
 pinus pinus, 398
 striata, 397
 tigrina, 385
 townsendi, 389
 virens virens, 390
 Dickcissel, 436
 Diving Ducks, 104
Dolichonyx oryzivorus, 417
 Domestic Pigeon, 255
 Dove, Eastern Ground, 257
 Eastern Mourning, 256
 Eastern White-winged, 257
 Rock, 255
 Dovekie, 253
 Doves, 255
 Dowitcher, Eastern, 205
 Long-billed, 206
Dryobates borealis, 288
 pubescens medianus, 287
 villosus villosus, 286
 Duck, Canvas-back, 106
 Common Black, 92
 Eastern Harlequin, 114
 Greater Scaup, 108
 Labrador, 115
 Lesser Scaup, 109
 Redhead, 104
 Red-legged Black, 92
 Ring-necked, 105

- Ruddy, 120
 Rufous-crested, 110
 Wood, 102
Dumetella carolinensis, 336
 Dunlin, European, 203

 Eagle, American Golden, 139
 Bald, 140
 Eagles, 133
Ectopistes migratorius, 257
 Egret, American, 67
 Snowy, 68
Egretta thula thula, 68
 Eider, American, 115
 King, 116
 ELANINAE, 128
Elanoides forficatus forficatus, 128
Empidonax flaviventris, 294
 minimus, 298
 trailli trailli, 297
 virescens, 295
Ereunetes amuri, 209
 pusillus, 208
Erismatura jamaicensis rubida, 120
 ERISMATURINAE, 120
Erolia testacea, 202
Euphagus carolinus, 424

Falco columbarius columbarius,
 147
 peregrinus anatum, 146
 rusticolus, 145
 sparverius sparverius, 148
 FALCONIDAE, 145
 Falcons, 145
 Finches, 432
 Finch, Eastern Purple, 438
 Flamingo, 80
 Flicker, Northern, 280
Florida caerulea caerulea, 71
 Flycatcher, Acadian, 295
 Alder, 297
 Least, 298
 Northern Crested, 292
 Olive-sided, 300
 Scissor-tailed, 291
 Yellow-bellied, 291
 Flycatchers, 289
Fratercula arctica arctica, 255
Fregata magnificens, 66
 FREGATIDAE, 66
 FRINGILLIDAE, 432
Fulica americana americana, 165
 Fulmar, Atlantic, 59
 FULMARINAE, 59
 Fulmars, 59
Fulmarus glacialis glacialis, 59

 Gadwall, 93
Gallinula chloropus cachinnans,
 164
 Gallinule, Florida, 164
 Purple, 163
 Gallinules, 155
 Gannet, 62
Gavia arctica pacifica, 49
 immer immer, 48
 stellata, 49
 GAVIIDAE, 48
 Geese, 82
Gelochelidon nilotica aranea, 237
Geothlypis trichas brachidactyla,
 409
Glaucionetta clangula americana,
 110
 islandica, 111
 Glaucous Gull, 222
 Gnatcatcher, Blue-gray, 352
 Gnatcatchers, 352
 Goatsuckers, 272
 Godwit, Hudsonian, 212
 Marbled, 211
 Golden-eye, American, 110
 Golden-eye, Barrow's, 111

- Goldfinch, Eastern, 441
 - European, 440
- Goose, Barnacle, 87
 - Blue, 90
 - Canada, 82
 - Greater Snow, 88
 - Lesser Snow, 88
 - White-fronted, 87
- Goshawk, Eastern, 129
- Grackle, Bronzed, 428
 - Purple, 425
 - Ridgway's, 425
 - Stone's, 425
- Grebe, Eared, 53
 - Holboell's, 50
 - Horned, 52
 - Pied-billed, 53
 - Western, 53
- Grebes, 50
- Grosbeak, Eastern Blue, 434
 - Eastern Evening, 437
 - Pine, 439
 - Rose-breasted, 433
- Grosbeaks, Finches, Sparrows and Buntings, 432
- Grouse, 150
- Grouse, Eastern Ruffed, 150
- Gruidae, 154
- Grus americana*, 154
- Guara alba*, 80
- Guillemot, Black, 254
- Guiraca caerulea caerulea*, 434
- Gull, Black-headed, 230
 - Bonaparte's, 232
 - Franklin's, 232
 - Glaucous, 222
 - Great Black-backed, 224
 - Herring, 226
 - Iceland, 223
 - Ivory, 235
 - Kumlien's, 228
 - Laughing, 230
 - Lesser Black-backed, 225
 - Little, 234
 - Ring-billed, 229
 - Sabine's, 236
- Gulls, 222
- Gyr Falcon, 145
- HAEMATOPODIDAE, 168
- Haematopus palliatus palliatus*, 168
- Haliaeetus leucocephalus*, 140
- Harriers, 141
- Hawk, American Rough-legged, 138
 - Broad-winged, 136
 - Cooper's, 132
 - Duck, 146
 - Eastern Red-tailed, 133
 - Eastern Sparrow, 148
 - Marsh, 141
 - Northern Red-shouldered, 134
 - Pigeon, 147
 - Sharp-shinned, 130
- Heath Hen, 151
- Hedymeles ludovicianus*, 433
- Helmitheros vermivorus*, 372
- Hen, Heath, 151
- Heron, Black-crowned Night, 73
 - Eastern Green, 72
 - Great Blue, 66
 - Little Blue, 71
 - Louisiana, 70
 - Yellow-crowned Night, 74
- Hérons, 66
- Hesperiphona vespertina vespertina*, 437
- Himantopus mexicanus*, 216
- HIRUNDINIDAE, 305
- Hirundo erythrogaster*, 310
- Histrionicus histrionicus histrionicus*, 114
- Hummingbird, Ruby-throated, 277

- Hummingbirds, 277
Hydranassa tricolor ruficollis, 70
 HYDROBATIDAE, 59
Hydroprogne caspia imperator, 246
Hylocichla fuscescens fuscescens,
 348
 guttata faxonii, 313
 minima aliciae, 346
 minima minima, 347
 mustelina, 342
 ustulata swainsoni, 344
 Ibis, Eastern Glossy, 79
 White, 80
 Wood, 79
 Ibises and Spoonbills, 79
Icteria virens virens, 410
 ICTERIDAE, 417
Icterus galbula, 423
 spurius, 422
Ionornis martinica, 163
Iridoprocne bicolor, 305
Ixobrychus exilis exilis, 78
Ixoreus naevius meruloides, 341
 Jaeger, Long-tailed, 221
 Parasitic, 220
 Pomarine, 219
 Jaegers, 219
 Jay, Blue, 314
 Jays, 314
Junco hyemalis hyemalis, 461
 oreganus, 462
 Junco, Oregon, 462
 Slate-colored, 461
 Killdeer, 172
 Kingbird, 289
 Kingbird, Arkansas, 290
 Gray, 290
 Kingfisher, Eastern Belted, 278
 Kingfishers, 278
 Kinglet, Eastern Ruby-crowned,
 354
 Golden-crowned, 353
 Kinglets and Gnatcatchers, 352
 Kites, 128
 Kite, Swallow-tailed, 128
 Kittiwake, Atlantic, 235
 Knot, American, 194
 LANIIDAE, 359
Lanius borealis borealis, 359
 ludovicianus migrans, 360
 Lapwing, 168
 LARINAE, 222
 Lark, Hoyt's Horned, 302
 Northern Horned, 302
 Prairie Horned, 303
 Larks, 301
Larus argentatus smithsonianus,
 226
 argentatus thayeri x *Larus*
 leucopterus, 228
 atricilla, 230
 delawarensis, 229
 fuscus, 225
 hyperboreus, 222
 leucopterus, 223
 leucopterus x *Larus argen-*
 tatus thayeri, 228
 marinus, 224
 minutus, 234
 philadelphia, 232
 pipixcan, 232
 ridibundus ridibundus, 230
Limnodromus griseus griseus, 205
 griseus scolopaceus, 206
Limosa fedoa, 211
 haemastica, 212
Lobipes lobatus, 218
 Loon, Common, 48
 Pacific, 49
 Red-throated, 49
 Longspur, Chestnut-collared, 475

- Lapland, 474
Lophodytes cucullatus, 121
Loxia curvirostra perna, 446
 curvirostra pusilla, 445
 curvirostra sitkensis, 446
 leucoptera, 446
- Magpie, American, 316
 Mallard, Common, 91
 Man-o'-War Bird, 66
Mareca americana, 95
 penelope, 94
 Martin, Purple, 312
 Meadowlark, Eastern, 419
 Western, 420
 Meadowlarks, Blackbirds and
 Orioles, 417
Megasceryle alcyon alcyon, 278
Melanerpes erythrocephalus, 284
Melanitta deglandi, 118
 perspicillata, 119
- MELEAGRIDAE, 154
Meleagris gallopavo silvestris, 154
Melopelia asiatica asiatica, 257
Melospiza georgiana, 472
 lincolni lincolni, 470
 melodia melodia, 473
 Merganser, American, 124
 Hooded, 121
 Red-breasted, 125
 Mergansers, 121
- MERGINAE, 121
Mergus merganser americanus, 124
 serrator, 125
Micropalma himantopus, 207
- MICROPODIDAE, 276
 MIMIDAE, 334
Mimus polyglottos polyglottos, 334
Mniotilta varia, 370
 Mockingbird, 334
Molothrus ater ater, 429
Moris bassana, 62
- MOTACILLIDAE, 355
 Murre, Atlantic, 252
 Brünnich's, 252
 Murres, 250
Muscivora forficata, 291
Myadestes townsendi, 350
Mycteria americana, 79
Myiarchus crinitus boreus, 292
Myiochanes virens, 299
- Nannus hiemalis hiemalis*, 329
Netta rufina, 110
Nettion carolinense, 99
 crecca, 98
 Nighthawk, Eastern, 273
Numenius americanus americanus,
 181
 arquatus arquatus, 182
- Nuthatches, 324
 Nuthatch, Northern White-
 breasted, 324
 Red-breasted, 325
Nuttallornis messoleucus, 300
Nyctanassa violacea violacea, 74
Nyctea nyctea, 265
Nycticorax nycticorax hoactli, 73
Nyroca affinis, 109
 americana, 104
 collaris, 105
 marila, 108
 valisineria, 106
- NYROCINAE, 104
Oberholseria chlorura, 447
Oceanodroma leucorhoa leu-
 corhoa, 59
Oceanites oceanicus, 59
Oenanthe oenanthe leucorhoa, 350
Oidemia americana, 117
 Old Squaw, 113
Oporornis agilis, 407
 formosus, 406
 philadelphia, 408

- Oriole, Baltimore, 423
 Orchard, 422
 Orioles, 417
 Osprey, 142
Otocoris alpestris alpestris, 302
 alpestris hoyti, 302
 alpestris praticola, 303
Otus asio naevius, 262
 Oven-bird, 403
 Owl, American Hawk, 266
 Arctic Horned, 263
 Barn, 260
 Burrowing, 266
 Eastern Screech, 262
 Great Gray, 268
 Great Horned, 263
 Long-eared, 268
 Northern Barred, 266
 Richardson's, 270
 Saw-whet, 271
 Short-eared, 269
 Snowy, 265
Oxyechus vociferus vociferus, 172
 Oyster-catcher, American, 168
 Oyster-catchers, 168

Pagolla wilsonia wilsonia, 172
Pandion haliaetus carolinensis, 142
Pagophila alba, 235
 PANDIONINAE, 142
 PARIDAE, 320
 Paroquet, Carolina, 258
 Parrots, 258
 Partridges and Quails, 151
Passer domesticus domesticus, 416
Passerculus princeps, 449
 sandwichensis labradorius,
 451
 sandwichensis savanna, 450
Passerella iliaca iliaca, 468
Passerherbulus henslowi susurrans,
 453

Passerina ciris, 436
 cyanea, 435
 PELECANIDAE, 61
Pelecanus erythrorhynchos, 61
 occidentalis occidentalis, 61
 Pelican, Brown, 61
 White, 61
 Pelicans, 61
Pelidna alpina alpina, 203
Pelidna alpina sakhalina, 203
Penthestes atricapillus atricapillus,
 320
 carolinensis carolinensis, 321
 hudsonicus hudsonicus, 322
 hudsonicus littoralis, 322
 PERDICIDAE, 151
 Petrel, Black-capped, 58
 Leach's, 59
 Wilson's, 59
 Petrels, Storm, 59
Petrochelidon albifrons albifrons,
 311
 Pewee, Eastern Wood, 299
Phaeopus borealis, 183
 hudsonicus, 182
 phaeopus phaeopus, 182
Phaëthon lepturus catesbyi, 60
 PHAËTHONTIDAE, 60
 PHALACROCORACIDAE, 64
Phalacrocorax auritus auritus, 65
 carbo carbo, 64
 Phalarope, Northern, 218
 Red, 216
 Wilson's, 217
 Phalaropes, 216
 PHALAROPODIDAE, 216
Phalaropus fulicarius, 216
Phasianus colchicus, 153
 PHASIANIDAE, 153
 Pheasant, 153
Philohela minor, 178
Philomachus pugnax, 213

- Phoebe, Eastern, 293
 Say's, 294
 PHOENICOPTERIDAE, 80
Phoenicopterus ruber, 80
Pica pica hudsonia, 316
 PICIDAE, 280
Picoides arcticus, 288
Picoides tridactylus bacatus, 289
 Pigeon, Domestic, 255
 Passenger, 257
 Pigeons and Doves, 255
Pinicola enucleator leucura, 439
 Pintail, American, 96
Pipilo erythrophthalmus erythrophthalmus, 447
 Pipit, American, 355
 Pipits, 355
Piranga erythromelas, 430
 ludoviciana, 430
 rubra rubra, 431
Pisobia bairdi, 200
 fuscicollis, 199
 melanotos, 198
 minutilla, 201
Plautus impennis, 250
Plectrophenax nivalis nivalis, 475
Plegadis falcinellus falcinellus, 79
 PLOCEIDAE, 416
 Plover, Black-bellied, 175
 Golden, 174
 Piping, 168
 Semipalmated, 170
 Upland, 184
 Wilson's, 172
 Plovers and Turnstones, 168
Pluvialis dominica dominica, 174
Podilymbus podiceps podiceps, 53
Poliophtila caerulea caerulea, 352
Poocetes gramineus gramineus, 459
Porzana carolina, 159
Progne subis subis, 312
Protonotaria citrea, 371
 PSITTACIDAE, 258
Pterodroma hasitata, 58
 Puffin, Atlantic, 255
 PUFFININAE, 55
 Puffins, 250
Puffinus diomedea borealis, 57
 diomedea diomedea, 57
 gravis, 56
 griseus, 55
 lherminieri lherminieri, 56
 puffinus puffinus, 56
Querquedula discors, 100
Quiscalus quiscula aeneus, 428
 quiscula ridgwayi, 425
 quiscula stonei, 425
 Rail, Black, 162
 King, 155
 Northern Clapper, 156
 Virginia, 158
 Yellow, 160
 Rails, Gallinules and Coots, 155
 RALLIDAE, 155
Rallus elegans elegans, 155
 limicola limicola, 158
 longirostris crepitans, 156
 Raven, Northern, 316
Recurvirostra americana, 215
 RECURVIROSTRIDAE, 215
 Redhead, 104
 Redpoll, Common, 442
 Greater, 443
 Hoary, 441
 Holboell's, 442
 Redstart, American, 415
 Red-wing, Eastern, 420
Regulus satrapa satrapa, 353
Richmondia cardinalis cardinalis, 432
Riparia riparia riparia, 306

- Rissa tridactyla tridactyla*, 235
 Robin, Eastern, 340
 Robins, 340
 Rock Dove, 255
 Ruddy and Masked Ducks, 120
 Ruff, 213
 RYNCHOPIDAE, 248
Rynchops nigra nigra, 248

 Sanderling, 214
 Sandpiper, Baird's, 200
 Buff-breasted, 210
 Curlew, 202
 Eastern Solitary, 188
 Least, 201
 Pectoral, 198
 Purple, 195
 Red-backed, 203
 Semipalmated, 208
 Stilt, 207
 Spotted, 187
 Western, 209
 White-rumped, 199
 Sandpipers, 178
 Sapsucker, Yellow-bellied, 285
Sayornis phoebe, 293
 saya saya, 294
 SCOLOPACIDAE, 178
Scolopax rusticola rusticola, 180
 Scoter, American, 117
 Surf, 119
 White-winged, 118
Scotiaptex nebulosa nebulosa, 268
Seiurus aurocapillus, 403
 molacilla, 405
 noveboracensis notabilis, 405
 noveboracensis noveboracensis, 404
Setophaga ruticilla, 415
 Shearwater, Audubon's, 56
 Cory's, 57
 Greater, 56
 Manx, 56
 Mediterranean, 57
 Sooty, 55
 Shearwaters, 55
 Short-winged Hawks, 129
 Shoveller, 101
 Shrike, Migrant, 360
 Northern, 359
 Shrikes, 359
Sialia sialis sialis, 349
 Siskin, Pine, 413
Sitta canadensis, 325
 carolinensis carolinensis, 324
 SITTIDAE, 324
 Skimmer, Black, 248
 Skimmers, 248
 Skua, Northern, 222
 Skylark, 30
 Snipe, 178
 Snipe, Wilson's, 180
Somateria mollissima dresseri, 115
 spectabilis, 116
 Solitaire, Townsend's, 350
 Sora, 159
 Sparrow, Acadian Sharp-tailed, 454
 Backman's, 461
 Baird's, 453
 Clay-colored, 464
 Eastern Chipping, 463
 Eastern Grasshopper, 452
 Eastern Henslow's, 453
 Eastern Lark, 460
 Eastern Savannah, 450
 Eastern Song, 473
 Eastern Tree, 462
 Eastern Vesper, 459
 English, 416
 Field, 465
 Fox, 468
 Harris's, 466
 Hudson Bay Sharp-tailed, 456
 Ipswich, 449

- Labrador Savannah, 451
 Lincoln's, 470
 Northern Seaside, 457
 Sharp-tailed, 455
 Swamp, 472
 White-crowned, 466
 White-throated, 467
 Sparrows, 432
Spatula clypeata, 101
Speotyto cunicularia hypugaea, 266
Sphyrapicus varius varius, 285
Spinus pinus pinus, 443
 tristis tristis, 444
Spiza americana, 436
Spizella arborea arborea, 462
 pallida, 464
 passerina passerina, 463
 pusilla pusilla, 465
Squatarola squatarola, 175
 Starling, 361
Steganopus tricolor, 217
Stelgidopteryx ruficollis serri-
 pennis, 309
 STERCORARIIDAE, 219
Stercorarius longicaudus, 221
 parasiticus, 220
 pomarinus, 219
Sterna antillarum antillarum, 243
 dougalli dougalli, 241
 fuscata fuscata, 242
 forsteri, 238
 hirundo hirundo, 239
 paradisaea, 241
 trudeaui, 237
 STERNINAE, 237
Sthenelides olor, 81
 Stilt, Black-necked, 216
 Stilts, 215
 Storks and Wood Ibises, 79
 STRIGIDAE, 260
 Storm Petrels, 59
Strix varia varia, 266
Sturnella magna magna, 419
 neglecta, 420
 STURNIDAE, 361
Sturnus vulgaris vulgaris, 361
Sula leucogaster leucogaster, 61
 SULIDAE, 61
 Surface-Feeding Ducks, 91
Surnia ulula caparoch, 266
 Swallow, Bank, 306
 Barn, 310
 Northern Cliff, 311
 Rough-winged, 309
 Tree, 305
 Swallows, 305
 Swan, Mute, 81
 Whistling, 81
 Swans, 81
 Swift, Chimney, 276
 Swifts, 276
 SYLVIIDAE, 352
 Tanager, Scarlet, 430
 Summer, 431
 Western, 430
 Tanagers, 430
 Teal, Blue-winged, 100
 European, 98
 Green-winged, 99
Telmatodytes palustris palustris,
 332
 Tern, American Caspian, 246
 Arctic, 241
 Black, 247
 Cabot's, 244
 Common, 239
 Forster's, 238
 Gull-billed, 237
 Least, 243
 Roseate, 241
 Royal, 244
 Sooty, 242
 Trudeau's, 237

- Terns, 237
 TETRAONIDAE, 150
Thalasseus maximus maximus, 244
sandvicensis aculeifluida, 244
 Thrasher, Brown, 338
 Thrashers, 334
 THRAUPIDAE, 430
 THRESKIORNITHIDAE, 79
 Thrush, Bicknell's, 347
 Eastern Hermit, 343
 Gray-cheeked, 346
 Northern Varied, 341
 Olive-backed, 344
 Wilson's, 348
 Wood, 342
 Thrushes, Robins, Bluebirds, 340
Thryomanes bewicki bewicki, 330
Thryothorus ludovicianus ludovicianus, 331
 Titmice, 320
 Titmouse, Tufted, 323
Totanus flavipes, 192
melanoleucus, 190
 Towhee, Green-tailed, 447
 Red-eyed, 447
 Townsend's Solitaire, 350
Toxostoma rufum, 338
Tringa solitaria solitaria, 188
 TROCHILIDAE, 277
Troglodytes aedon aedon, 328
 TROGLODYTIDAE, 328
 Tropic-Birds, 60
 Tropic-bird, Yellow-billed, 60
Tryngites subruficollis, 210
 TURDIDAE, 340
Turdus migratorius migratorius, 340
 Turkey, Eastern, 154
 Turkeys, 154
 Turnstone, Ruddy, 177
Tympanuchus cupido cupido, 151
 TYRANNIDAE, 289
Tyrannus dominicensis dominicensis, 290
tyrannus, 289
verticalis, 291
Tyto alba pratincola, 260
 TYTONIDAE and STRIGIDAE, 260
Uria aalge aalge, 252
lomvia lomvia, 252
Vanellus vanellus, 168
Vermivora celata celata, 378
chrysoptera, 374
lawrencei, 376
leucobronchialis, 376
peregrina, 377
pinus, 375
ruficapilla ruficapilla, 379
 Veery, 348
 Vireo, Bell's, 364
 Blue-headed, 366
 Eastern Warbling, 369
 Philadelphia, 368
 Red-eyed, 367
 White-eyed, 363
 Yellow-throated, 364
Vireo belli belli, 364
flavifrons, 364
gilvus gilvus, 369
griseus griseus, 363
olivaceous, 367
philadelphicus, 368
solitarius solitarius, 366
 VIREONIDAE, 363
 Vireos, 363
 Vulture, Black, 128
 Turkey, 126
 Vultures, 126
 Wagtails and Pipits, 355
 Warbler, Bay-breasted, 397
 Black and White, 370

- Blackburnian, 393
- Black-poll, 397
- Black-throated Blue, 386
- Black-throated Green, 390
- Blue-winged, 375
- Brewster's, 376
- Canada, 414
- Cape May, 385
- Cerulean, 392
- Chestnut-sided, 394
- Connecticut, 407
- Eastern Yellow, 382
- Golden-winged, 374
- Hooded, 412
- Kentucky, 406
- Lawrence's, 376
- Magnolia, 384
- Mourning, 408
- Myrtle, 388
- Nashville, 379
- Northern Parula, 381
- Northern Pine, 398
- Orange-crowned, 378
- Palm, 401
- Prairie, 399
- Prothonotary, 371
- Tennessee, 377
- Townsend's, 389
- Sycamore, 394
- Wilson's, 413
- Worm-eating, 372
- Yellow Palm, 401
- Yellow-throated, 394
- Warblers, Wood, 370
- Water-Thrush, Grinnell's, 405
 - Louisiana, 405
 - Northern, 404
- Waxwing, Bohemian, 356
 - Cedar, 356
- Waxwings, 356
- Weaver Finches, 416
- Wheatear, Greenland, 350
- Whimbrel, 182
- Widgeon, European, 94
- Willet, Eastern, 189
 - Western, 189
- Whip-poor-will, Eastern, 272
- Wilsonia canadensis*, 414
 - citrina*, 412
 - pusilla pusilla*, 413
- Woodcock, 178
- Woodcock, European, 180
- Woodcock, Snipe, Sandpipers, 178
- Woodpecker, American Three-toed, 289
 - Arctic, Three-toed, 288
 - Eastern Hairy, 286
 - Northern Downy, 287
 - Northern Pileated, 282
 - Red-bellied, 284
 - Red-cockaded, 288
 - Red-headed, 284
- Woodpeckers, 280
- Wood Warblers, 370
- Wren, Bewick's, 330
 - Carolina, 331
 - Eastern Winter, 329
 - House, 328
 - Long-billed Marsh, 332
 - Short-billed Marsh, 333
- Wrens, 328
- Xanthocephalus xanthocephalus*, 420
- Xema sabini*, 236
- Yellow-legs, Greater, 190
 - Lesser, 192
- Yellow-throat, Northern, 409
- Zenaidura macroura carolinensis*, 256
- Zonotrichia albicollis*, 467
 - leucophrys leucophrys*, 466
 - querula*, 466









CONNECTICUT

NEW HAVEN

NEW HAVEN

NORTHWILTON

FAIRFIELD

BRIDGEPORT

DARIEN

STAMFORD

LONG ISLAND SOUND

PORT JEFFERSON

MATTITUCK

LAUREL

JAMESPORT
RIVERHEAD

MANORVILLE

STONYBROOK

NORTH PORT

COLDSPRING
OYSTER BAY
HUNTINGTON

JERICO

HICKSVILLE

SUFFOLK COUNTY

SOUTH HAVEN

CENTER MORICHES
SPEONK

AMITYVILLE
SEAFORD
BABYLON

BAYSHORE

ISLIP

HECKSCHER

WEST SAYVILLE

PATCHOGUE

MORICHES BAY

WEST HAMPTON BEACH

GREAT SOUTH BAY

FIRE ISLAND

GREAT SOUTH BEACH

OAK ISLAND BEACH

JONES BEACH

ATLANTIC OCEAN



NEW YORK CITY REGION
COVERED IN THIS BOOK
EASTERN HALF

AMNH LIBRARY



100058894